

## DOCUMENT RESUME

ED 415 316

UD 032 098

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TITLE Dropout Rates in the United States: 1996.  
INSTITUTION MPR Associates, Berkeley, CA.  
SPONS AGENCY National Center for Education Statistics (ED), Washington, DC.  
REPORT NO NCES-98-250  
ISBN ISBN-0-16-049317-X  
PUB DATE 1997-12-00  
NOTE 110p.  
AVAILABLE FROM U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.  
PUB TYPE Numerical/Quantitative Data (110) -- Reports - Evaluative (142)  
EDRS PRICE MF01/PC05 Plus Postage.  
DESCRIPTORS Black Students; Census Figures; Comparative Analysis; \*Dropout Rate; \*High School Graduates; High School Students; High Schools; \*Hispanic Americans; \*Low Income Groups; National Surveys; \*Racial Differences; School Holding Power; Socioeconomic Status; Tables (Data); Urban Youth; White Students

## ABSTRACT

This report, ninth in a series, presents data for 1996 on high school dropout and persistence rates, and examines high school completion and graduation rates. In addition to extending time series data reported in earlier years, the report focuses on the characteristics of high school dropouts and school completers in 1996. Although the reporting of dropout statistics is no longer required by law, this report has been continued because of the importance of charting dropout behavior among America's youth. It is based on the best and most current data available, including the Current Population Survey of the Bureau of the Census. Five of every 100 young adults enrolled in high school in October 1995 left school before October of 1996 without completing a high school program. This estimate of 5% is on a par with those reported over the last 10 years. A larger percentage of Hispanic students, compared with Whites, leave school short of completing a high school program. Although the 6.7% rate for Black students falls between the rate of 9.0% for Hispanics and 4.1% for Whites, the differences are not significant. In addition, Hispanic young adults without a high school credential have completed less schooling than Black and White dropouts. In 1996, young adults living in families with incomes in the lowest 20% of all family incomes were twice as likely to drop out as their peers from families in the top 20%. While 96% of young adults from families with high incomes had a high school diploma, only about 75% of youths from low-income families reached this goal. Some young people re-enroll or complete high school credentials through alternative routes. The percent holding alternative certification has doubled from 4.9% in 1990 to 9.8% in 1996. These changes hold true throughout the country. Appendixes contain standard error and time series tables, technical notes, and supplemental tables. (Contains 17 tables and 5 figures.) (SLD)

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# Dropout Rates in the United States: 1996

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## **NATIONAL CENTER FOR EDUCATION STATISTICS**

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# **Dropout Rates in the United States: 1996**

**Marilyn M. McMillen**  
**National Center for Education Statistics**

**Phillip Kaufman**  
**MPR Associates, Inc.**

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**U.S. Department of Education  
Office of Educational Research and Improvement**

**NCES 98-250**

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*Commissioner*

The National Center for Education Statistics (NCES) is the primary federal entity for collecting, analyzing, and reporting data related to education in the United States and other nations. It fulfills a congressional mandate to collect, collate, analyze, and report full and complete statistics on the condition of education in the United States; conduct and publish reports and specialized analyses of the meaning and significance of such statistics; assist state and local education agencies in improving their statistical systems; and review and report on education activities in foreign countries.

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December 1997

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<http://nces.ed.gov>

**Suggested Citation**

U.S. Department of Education. National Center for Education Statistics. *Dropout Rates in the United States: 1996*, NCES 98-250, by Marilyn M. McMillen and Phillip Kaufman. Washington, DC: 1997.

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## FOREWORD

The National Center for Education Statistics (NCES) collects and publishes information on the condition of education in the United States. Under mandate from the Hawkins-Stafford Elementary and Secondary School Improvements Amendment of 1988 (P.L. 100-297), NCES released the first annual report on school dropouts in 1989. Although the reporting of dropout statistics is no longer required by law, this report has been continued because of the importance of charting dropout behavior among America's youth.

This report, the ninth in the series, presents data for 1996 on high school dropout and persistence rates, and examines high school completion and graduation rates. In addition to extending time series data reported in earlier years, this report focuses on the characteristics of high school dropouts and high school completers in 1996.

The report is based on the best and most current national data available at this time. It utilizes the data from the Current Population Survey conducted by the Bureau of the Census to develop national event and status dropout rates and the National Education Longitudinal Study of 1988 to develop 8th- through 12th-grade and 10th- through 12th-grade cohort dropout rates. As a part of an ongoing effort to expand and improve data collected about dropouts, NCES initiated a dropout statistics collection in the 1991-92 school year as a component of the Common Core of Data; data from the fourth year of that collection are included in this report. Current Population Survey data are also used to develop national and state-specific high school completion rates.

I hope the information in this report will be useful in discussions about this critical national issue.

Pascal D. Forgione, Jr.  
Commissioner of Education Statistics

## **ACKNOWLEDGMENTS**

Many individuals made substantial contributions to the preparation of this report. This report was prepared under the direction of Paul Planchon, Associate Commissioner for Surveys and Cooperative Systems Group.

Special recognition is extended to Rosalind Bruno of the Education and Social Stratification Branch, Population Division, Bureau of the Census for her contributions to the preparations of the sections of the report based on the CPS data. Thanks also go to the staff at the National Opinion Research Center at the University of Chicago for their work in the collection and preparation of the data from NELS:88. Without the efforts of Lee Hoffman and Jonaki Bose at NCES, the CCD dropout data collection would not continue to expand; we thank them for their hard work.

At NCES, Nabeel Alsalam and his staff provided assistance in formulating the definition of event dropouts applied to the CPS data. They also provided the family income data used in the reporting of the event and status rates in this report. Summer D. Whitener, in the Surveys and Cooperative Systems Group at NCES, also deserves special recognition for her assistance in coordinating and organizing the release and distribution of this document.

Without the assistance of Jennifer Berkold, Denise Bradby, Karyn Madden, Don Eike, Steve Klein, Bobbi Kridl, Leslie Retallick, Francesca Tussing, and Wanjiru Wanyeki of MPR Associates, this report could not have been prepared. They provided invaluable analytical, editorial, graphic, and production assistance.

The report was reviewed within the U.S. Department of Education by Lee Hoffman, Robert Burton, and Mary Frase of NCES, Laura Salganik at ESSI, and Tim Madigan at the Bureau of the Census. While, of course, we are responsible for any remaining flaws, their efforts and contributions are greatly appreciated.

## EXECUTIVE SUMMARY

This is the ninth in a series of National Center for Education Statistics reports on high school dropout and completion rates. It presents data on rates in 1996, the most recent year for which data are available, and includes time series data on high school dropout and completion rates for the period 1972 through 1996. In addition to extending time series data reported in earlier years, this report examines the characteristics of high school dropouts and high school completers in 1996.

**Table A—Proportion of 15- to 24-year-olds dropping out of grades 10 to 12, proportion of 16- to 24-year-olds who were dropouts, and proportion of 18- to 24-year-olds who completed high school, by race-ethnicity: 1996**

	Total	White, non-Hispanic	Black, non-Hispanic	Hispanic
Percent age 15 to 24 dropping out in 1995	5.0	4.1	6.7	9.0
Percent of youth 16 to 24 who were dropouts in 1996	11.1	7.3	13.0	29.4
Percent of youth 18 to 24 who were high school completers in 1996	86.2	91.5	83.0	61.9

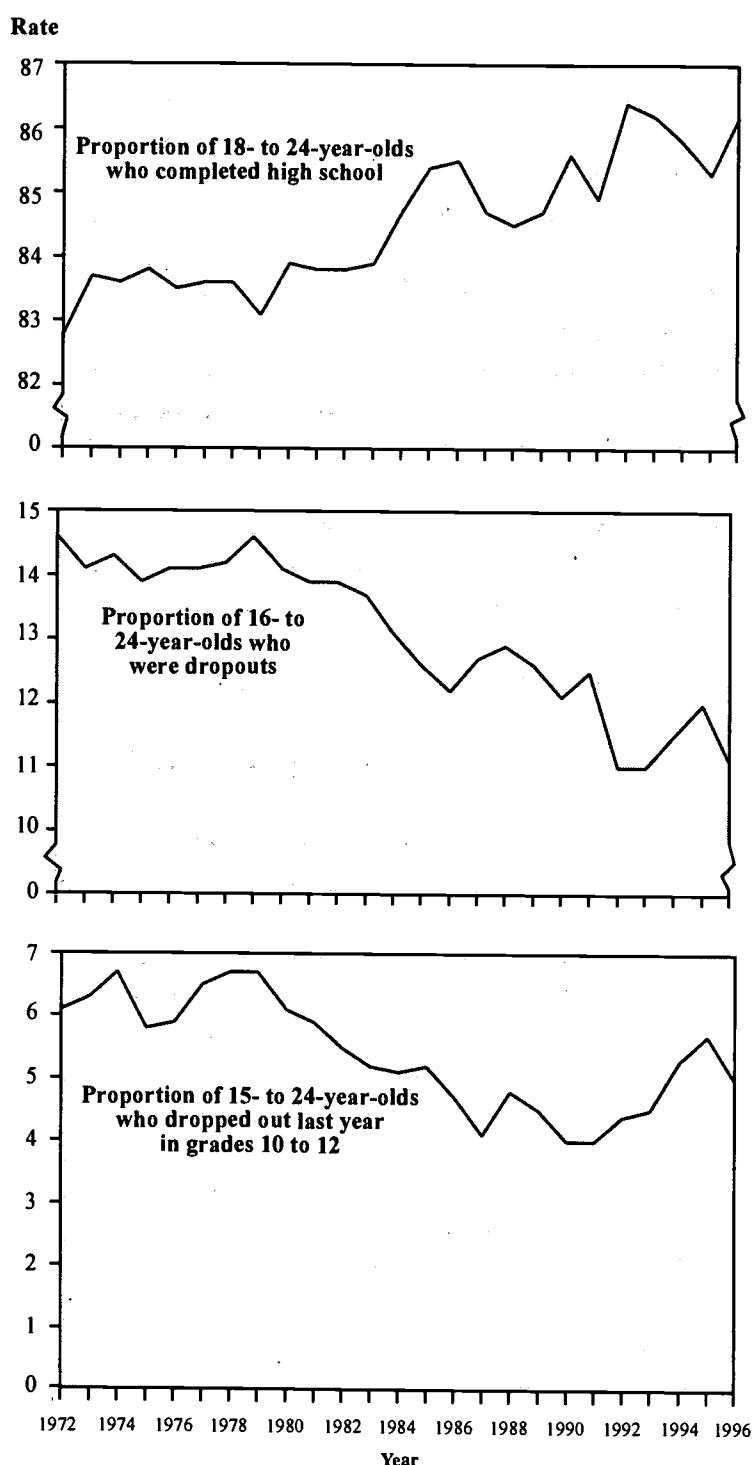
SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

### *Event Dropout Rates*

Event dropout rates for 1996 describe the proportion of youths ages 15 through 24 years who dropped out of school in the 12 months preceding October 1996. Demographic data collected in the Current Population Survey (CPS) permit event dropout rates to be calculated across a variety of individual characteristics, including race, sex, region of residence, and income level.

- Five out of every 100 young adults enrolled in high school in 1995 left school before October of 1996 without successfully completing a high school program. This estimate of 5 percent is on a par with those reported over the last 10 years (figure A).

**Figure A—Proportion of 15- 24-year-olds dropping out of grades 10 to 12, proportion of 16- to 24-year-olds who were dropouts, and proportion of 18- to 24-year-olds who completed high school: 1972 to 1996**



SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years).

- A larger percentage of Hispanic students, compared with white students, leave school short of completing a high school program. Although the 6.7 percent rate for black students falls between the rate of 9.0 percent for Hispanics and 4.1 percent for whites, the differences are not significant (table 1).
- In 1996, young adults living in families with incomes in the lowest 20 percent of all family incomes were five times as likely as their peers from families in the top 20 percent of the income distribution to drop out of high school. Two-thirds of this gap was due to differences between students in the lowest and middle income groups (table 1).
- Students who remain in school after the majority of their age cohort has left drop out at higher rates than their younger peers (table 2).
- Although dropout rates were highest among students age 19 or older, about three-fourths of the current year dropouts were ages 15 through 18; moreover, 43 percent of the 1996 dropouts were 15 through 17 years of age (table 2).

#### *Status Dropout Rates*

Over the last decade, between 300 and 500 thousand 10th- through 12th-grade students left school each year without successfully completing a high school program. Each year some of these young adults return to school or an alternative certification program, and others pass out of this age group. Status dropout rates describe the proportion of young adults ages 16 through 24 who are out of school without a high school credential.

- In October of 1996, some 3.6 million young adults were not enrolled in a high school program and had not completed high school. These youths account for 11.1 percent of the 32.4 million 16- through 24-year-olds in the United States in 1996 (table A).
- There are still differences in the levels of the status dropout rates of whites, blacks, and Hispanics, but decreases over the past quarter century have narrowed the gap between the rates for blacks and whites (figure 3).
- Hispanic young adults in the United States have not shared in this improvement. Moreover, Hispanic young adults without a high school credential have completed less schooling than black and white dropouts (table 6).
- Forty-four percent of Hispanic young adults born outside the 50 states and the District of Columbia are counted as high school dropouts. Although the dropout rates

of Hispanics with one or both parents born in the United States are lower, they are higher than the dropout rates of whites and blacks (table 7).

- In 1996, there was nearly a 20-percentage-point gap between the dropout rates of youths from the highest and lowest income levels. Youths from families with the lowest incomes were nearly eight times more likely to be dropouts than those from families with high incomes (table 5).
- The status dropout rates in the Southern and Western regions of the country are one and one-half times those in the Northeast and Midwest (table 5).

### *High School Completion Rates*

The high school completion rate includes everyone reporting a high school diploma or the equivalent as having completed high school, regardless of the type of credential.

- In 1996, about 86 percent of all 18- through 24-year-olds, not still enrolled, had completed a high school program (figure A).
- White and black young adults both registered increases in this rate during the 1970s and 1980s, with 1996 rates of 91.5 percent for whites and 83 percent for blacks. Hispanic young adults have not shared in this improvement, with only about 62 percent reported as having completed high school by 1996 (table 14).
- Ninety-six percent of young adults in families with high incomes held high school credentials in 1996, while only about three-quarters of youths from low income families reached this goal (table 14).

### *Methods of Completion*

Most young adults complete a regular diploma and graduate from high school; others complete by an alternative route, such as the General Educational Development (GED) test.

- During the 1990s the percent of young adults, not still enrolled, holding a high school credential has remained relatively unchanged; however the percent holding an alternative certification has doubled from 4.9 percent in 1990 to 9.8 percent in 1996, and the percent holding regular diplomas has decreased by a commensurate amount (table 13).
- This changing pattern is reflected in the experiences of both white and black young adults, and is evident in each region of the country.

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## INTRODUCTION

This is the ninth annual dropout report from the National Center for Education Statistics (NCES). This year's report spans the 25-year time period from 1972 through 1996, and focuses primarily on updates to annual time series data. Data from the October 1996 Current Population Survey (CPS) of the U.S. Bureau of the Census are used to compute national high school dropout and completion rates disaggregated by sex and race-ethnicity, income levels, and regions of the country. State-level data from the CPS are used to produce estimates of high school completion rates by state. In addition, NCES data from the Common Core of Data (CCD) are used to provide estimates of dropout rates by state.

### Addressing the Problem

Young adults who leave school short of high school graduation face a number of potential hardships. Past research has shown that, compared with high school graduates, relatively more dropouts are unemployed and those dropouts who do succeed in finding work earn less money than high school graduates.<sup>1</sup> High school dropouts are also more likely to receive public assistance than high school graduates who do not go on to college.<sup>2</sup> This increased reliance on public assistance is likely due, at least in part, to the fact that young women who drop out of school are more likely to have children at younger ages and more likely to be single parents.<sup>3</sup>

Secondary schools in today's society are faced with the challenge of increasing curricular rigor to strengthen the knowledge base of high school graduates, while at the same time increasing the proportion of all students who successfully complete a high school program. Reform advocates call for more effort devoted to linking schooling to the future, with an emphasis placed on high school graduates as skilled learners with the ability to continue their education and skills acquisition in college, technical school, or work-based programs.<sup>4</sup>

The pressures placed on the education system to turn out increasingly larger numbers of qualified lifelong learners have led to an increased interest in the role that alternative methods of high school completion may play in helping some students meet these goals. At this point, most students pursuing an alternative to a regular diploma take the General Educational Development (GED) tests, with the goal of earning a high school equivalency credential.

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<sup>1</sup>U.S. Department of Education, National Center for Education Statistics, *Condition of Education 1996* (Washington, D.C.: 1996), Indicators 32 and 34.

<sup>2</sup>U.S. Department of Education, National Center for Education Statistics, *Condition of Education 1996* (Washington, D.C.: 1996), Indicator 36.

<sup>3</sup>In M. McMillen and P. Kaufman, *Dropout Rates in the United States: 1994* (Washington, D.C.: U.S. Department of Education, National Center for Education Statistics, NCES 96-863, 1994).

<sup>4</sup>U.S. Department of Education, *Raising the Educational Achievement of Secondary School Students: An Idea Book* (Washington D.C.: Planning and Evaluation Service, 1995).

## GED as an Alternative

Over the 25-year period covered by this report, approximately 17 million people took the GED tests and about 10 million, or 60 percent, received a high school equivalency credential based on the GED tests.<sup>5</sup> At this point about three-quarters of a million people take the GED test each year and nearly a half million test-takers receive a GED credential. A passing score is set nationally by the test administrator at the American Council on Education. Individual states set their own passing scores at or above the minimum requirement. Effective January 1, 1997, this minimum passing score was raised to a new standard which is met by only 66 percent of graduating high school seniors.<sup>6</sup>

Anyone age 16 or older who is out of school without a high school diploma can register and take the GED tests. Although no formal preparation is required, many applicants attend classes to help them prepare for the tests. These preparatory classes are available in a number of settings—many cable and public television stations carry a GED preparation program; alternatively, more formal programs are available through federally funded Adult Secondary Education (ASE) programs, through secondary vocational education programs, and increasingly through schools serving at-risk youths.<sup>7</sup>

Historically, the GED was established as a means of providing a high school credential to World War II veterans who may have interrupted their schooling to go to war. Since that time the GED has been viewed as a second-chance program for people who failed to graduate from a regular high school program. Seemingly in contradiction with these programmatic goals, data on GED test-takers show that while the average age of GED test-takers is about 26, over the last quarter century one-third of the test-takers have been ages 16 through 19.<sup>8</sup>

In recent years, research into the adult outcomes for GED credential holders, as compared to dropouts on the one hand and regular diploma recipients on the other, has fueled a debate over the value of the GED credential. There is conflicting evidence in the research literature concerning the effects of a GED credential on labor force participation, employment, earnings, wage rates, postsecondary program participation, and persistence in postsecondary programs.<sup>9</sup>

<sup>5</sup>U.S. Department of Education, *The Digest of Education Statistics 1996* (Washington D.C.: National Center for Education Statistics NCES 96-133, 1996), table 100. Note data for U.S. outlying areas are included in these counts.

<sup>6</sup>American Council of Education, *Test of GED, Technical Manual* (Washington, D.C.: GED Testing Service, 1993).

<sup>7</sup>U.S. Department of Education, *Goal 2 High School Completion—What Do We Need to Know?* (Washington D.C.: U.S. Department of Education, 1996).

<sup>8</sup>U.S. Department of Education, *The Digest of Education Statistics 1996* (Washington D.C.: National Center for Education Statistics NCES 95-029, 1996), table 100.

<sup>9</sup>See, for example, R.J. Murnane, J.B. Willet, and K.P. Boudett, "Do high school dropouts benefit from obtaining a GED?" *Education and Policy Analysis* 17(2): 133-47; Iowa Department of Education, *What has happened to Iowa's GED graduates? A two-, five-, and ten-year follow-up study* (Des Moines: State of Iowa Department of Education ED 344-047, 1992); J. Baldwin, I.S. Hirsch, D. Rock, and K. Yamamoto, *The Literacy Proficiencies of GED Examinees: Results from the GED-NALS Comparison Study* (Washington D.C. and Princeton, NJ: The American Council on Education and the Educational Testing Service, 1995). Also for a detailed review of the literature, see D. Boesel, N. Alsalam, and T. Smith, *Educational and Labor Market Performance of GED Recipients* (Washington D.C.: U.S. Department of Education, National Library of Education, forthcoming).

These conflicting findings have led some to question the efficacy of promoting GED programs for youths who are still young enough to participate in regular high school programs. Clearly, this debate points to the need for more research into the characteristics of youths following each of these three paths, and into the lifelong outcomes of the members of these three groups. This debate also highlights the need to monitor the characteristics and the relative size of the groups of dropouts, high school graduates, and alternative completers.

## EVENT, STATUS, AND COHORT DROPOUT RATES

Event, status, and cohort dropout rates each provide a different perspective on the student dropout population. The National Center for Education Statistics includes definitions and data for each type of dropout rate in order to provide a detailed profile of dropouts in the United States. High school graduation and completion rates complete the profile of high school outcomes for young adults in the United States.

### Types of Dropout Rates

- **Event** rates describe the proportion of students who leave school each year without completing a high school program. This annual measure of recent dropout occurrences provides important information about how effective educators are in keeping students enrolled in school.
- **Status** rates provide cumulative data on dropouts among all young adults within a specified age range. Status rates are higher than event rates because they include all dropouts, regardless of when they last attended school. Since status rates reveal the extent of the dropout problem in the population, this rate also can be used to estimate the need for further education and training that will help dropouts participate fully in the economy and life of the nation.
- **Cohort** rates measure what happens to a cohort of students over a period of time. This rate is based on repeated measures of a group of students with shared experiences and reveals how many students starting in a specific grade drop out over time. Typically, cohort rates from longitudinal studies provide more background and contextual data on the students who drop out than are available through the CPS or CCD data collections.

### Event Dropout Rates

Event rates calculated using the October 1996 CPS data measure the proportion of students who dropped out between October 1995 and October 1996.<sup>10</sup> These dropouts are 15-through 24-year-olds who were enrolled in high school in October of 1995, but had not completed high school and were not enrolled in grades 10 through 12 a year later.<sup>11</sup> By October

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<sup>10</sup>Specifically, the numerator of the event rate for 1996 was the number of persons 15 through 24 years old surveyed in 1996 who were enrolled in high school in October of 1995, were not enrolled in October of 1996, and also did not complete high school (i.e., had not received a high school diploma or an equivalency certificate) between October 1995 and October 1996. The denominator of the event rate is the sum of the dropouts (i.e., the numerator) and the number of all persons 15 through 24 years old who attended grades 10 through 12 and are still enrolled or graduated or completed high school.

<sup>11</sup>Completion includes receiving an alternative credential such as a GED.

1996, 5 out of every 100 young adults (5 percent) enrolled in high school in October 1995 left high school without successfully completing a high school program (table 1 and C1).<sup>12</sup>

**Table 1—Event dropout and persistence rates and number and distribution of dropouts from grades 10–12, ages 15–24, by background characteristics: October 1996**

Characteristics	Event dropout rate (percent)	School persistence rate (percent)	Number of dropouts (thousands)	Percent of all dropouts
Total	5.0	95.0	485	100.0
Sex				
Male	5.0	95.0	241	49.6
Female	5.1	94.9	245	50.4
Race–ethnicity <sup>1</sup>				
White, non-Hispanic	4.1	95.9	267	54.9
Black, non-Hispanic	6.7	93.3	103	21.1
Hispanic	9.0	91.0	100	20.6
Family income <sup>2</sup>				
Low income level	11.1	88.9	145	29.8
Middle income level	5.1	94.9	282	58.1
High income level	2.1	97.9	59	12.1
Region				
Northeast	3.4	96.6	61	12.6
Midwest	4.6	95.4	109	22.5
South	5.5	94.5	180	37.0
West	6.2	93.8	135	27.9

<sup>1</sup>Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

<sup>2</sup>Low income is defined as the bottom 20 percent of all family incomes for 1996; middle income is between 20 and 80 percent of all family incomes; and high income is the top 20 percent of all family incomes. See the technical appendix to this report for a full definition of family income.

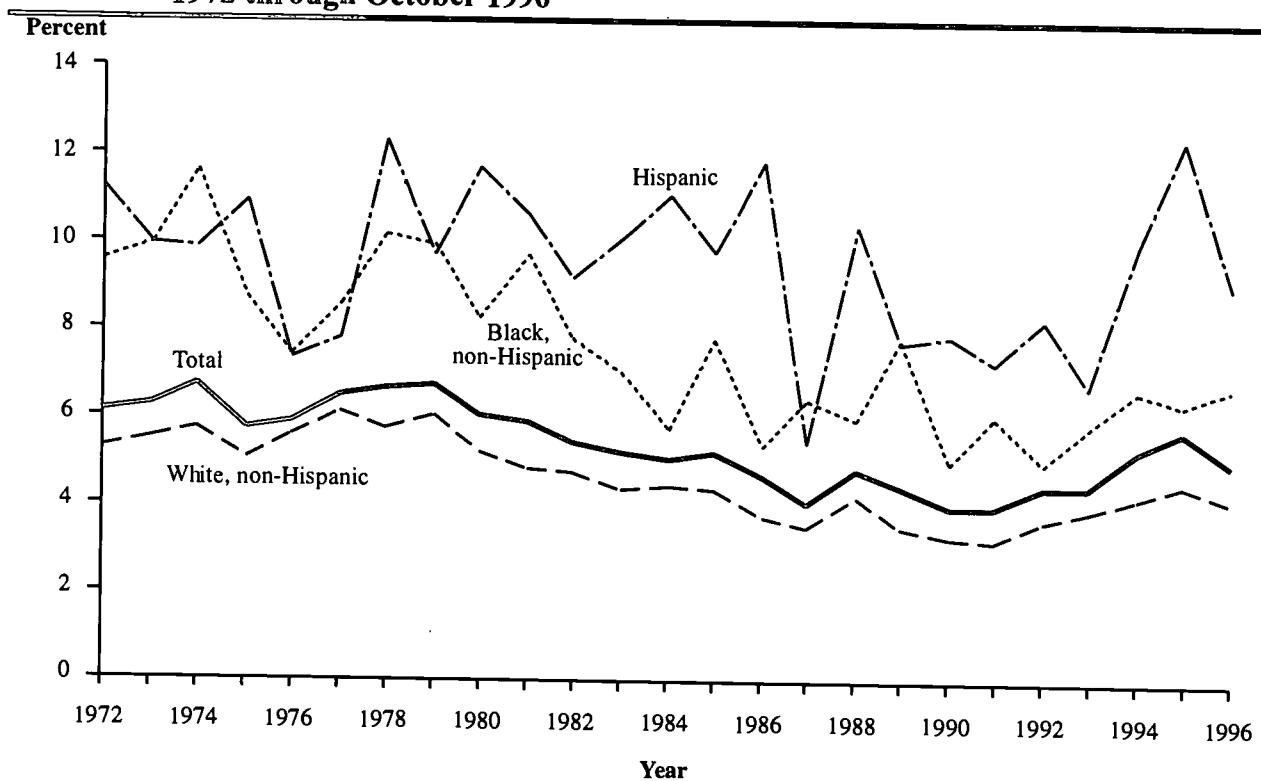
NOTE: Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

<sup>12</sup>Standard errors for all tables and figures are provided in appendix A.

Over the past quarter century, annual estimates of the event dropout rate have fluctuated between 4.0 and 6.7 percent (figure 1 and table C3).<sup>13</sup> There was a downward trend in the estimated percentage of current year high school dropouts in the 1980s and early 1990s.<sup>14</sup> However, changes in survey methodology complicate the analysis of recent estimates. The annual event dropout rates declined between 1978 and 1986, when a change in the editing procedures for the school enrollment items may have affected reporting.<sup>15</sup>

Figure 1—Event dropout rates for grades 10–12, ages 15–24, by race–ethnicity: October 1972 through October 1996



SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

<sup>13</sup>The statistical significance of these comparisons was assessed with Student's *t*-test with a Bonferroni correction for multiple comparisons. For a full discussion of the statistical methods used in this report, see appendix B. All comparisons in this report are statistically significant at the  $\alpha = 0.05$  level.

<sup>14</sup>The time trends noted in this report were assessed using weighted least squares regressions.

<sup>15</sup>The Census Bureau instituted new editing procedures for cases with missing data on school enrollment items (see Technical Appendix B).

More recently, additional changes in data collection and estimation procedures coincided with an apparent increase in the rates from 1991 through 1995.<sup>16</sup> In fact, the 1995 event dropout rate of 5.7 percent was significantly higher than the rates registered for all but one year between 1986 and 1993.<sup>17</sup> By comparison, although the 1996 rate of 5.0 percent is not significantly lower than the 1995 rate, it is also not significantly higher than the rates registered between 1986 and 1993. (table C3)

The percentage of young adults who left school each year without successfully completing a high school program decreased from 1972 through 1986, but the rates over the subsequent years have not shown a consistent pattern. Although there have been year-to-year fluctuations, the net effect leads to the conclusion that the percentage of students dropping out each year has neither increased nor decreased since the late 1980s.

#### *Race-Ethnicity*

The 1996 CPS data are consistent with earlier reports of a strong association between race-ethnicity and dropping out of school. In particular, cohort studies of national longitudinal data for American high school students, such as the High School and Beyond survey sponsored by NCES, show that Hispanics and blacks are at greater risk of dropping out than whites, with Hispanics at a greater risk of dropping out than either white or black students.<sup>18</sup> More recently, analyses of data from the NCES National Education Longitudinal Study, and analyses reported by the White House Panel on Hispanic Dropouts also confirm these patterns.<sup>19</sup>

Data from the October 1996 CPS repeat this pattern, showing an event dropout rate of 9.0 percent for Hispanic students, higher than the rate of 4.1 percent for white students.<sup>20</sup> The estimated rate for black students (6.7 percent) falls between the rates for Hispanics and whites, but the differences are not significant (table 1).<sup>21</sup>

Race-ethnicity is only one of a number of closely linked factors that mediate a student's decision to drop out of school. A number of other factors that more than likely play an important role in this decision are highly correlated with an individual's racial and ethnic background. Just to

<sup>16</sup>The wording of the educational attainment of the CPS was changed in 1992. Furthermore, data since 1994 may reflect changes in CPS due to newly instituted computer-assisted interviewing, and also may reflect the change from 1980 census-based estimates to 1990 census-based estimates, with adjustment for undercount.

<sup>17</sup>The 1995 event dropout rate was higher than the rates for 1986, 1987, and 1989-93, but not for 1988.

<sup>18</sup>See R. Ekstron, M. Goertz, J. Pollack and D. Rock, "Who Drops Out of High School and Why? Findings from a National Study," in *School Dropouts: Patterns and Policies*, ed. G. Natriello (New York: Teachers College Press, 1987), 52-69. For dropout data using the National Education Longitudinal Study, see the NCES publication, *Dropout Rates in the United States: 1994*.

<sup>19</sup>M. McMillen and P. Kaufman, *Dropout Rates in the United States: 1994* (Washington, D.C.: National Center for Education Statistics, U.S. Department of Education, NCES 96-863); White House Panel on Hispanic Dropouts, OBEMLA, 1996.

<sup>20</sup>While these differences appear to be relatively large, they are not statistically significant at the 0.05 level due to relatively large standard errors.

<sup>21</sup>The erratic nature of the Hispanic event rate reflects, in part, the small sample size of Hispanics in CPS.

name a few, examples include socioeconomic background, the ability to communicate in English, and geographic region of residence. Analyses of all of the specific interactions among intervening variables that mediate the dropout decision are beyond the scope of this report. Instead, this report reviews some of the primary factors that are associated with higher event dropout rates.<sup>22</sup>

### *Income*

The Current Population Survey includes family income data that can be used to provide information about the impact of socioeconomic background and home environment on the decisions of these young adults to drop out. Of course the range of factors that affect young adults' life decisions extend beyond the economic conditions associated with family income; however, in the absence of additional measures, family income serves as a good indicator for the other social and economic factors that are likely to have an impact on a young adult's decision to stay in school. In 1996, 11.1 percent of students from families in the lowest 20 percent of the income distribution dropped out of high school; by way of comparison, 5.1 percent in the middle 60 percent of the income distribution dropped out, and 2.1 percent of students from families with incomes in the top 20 percent dropped out (table 1).

Comparable data spanning the last quarter century provide strong evidence that income, and more than likely the complex of social factors affected by income, makes a difference in the dropout decision process. The annual event dropout rates for students with family incomes in the lowest 20 percent of the family income distribution range from 4.5 to 11 times the dropout rates recorded for students with family incomes in the top 20 percent of the family income distribution (figure 2). A comparison of the annual dropout rates at each income level suggests that there is a larger gap between the dropout rates for students in the lowest versus the middle income group than there is between the rates for students in the middle and highest income groups. A more detailed examination of these data shows that, on average, the gap between the dropout rates in the highest and lowest income groups is 11.5 percentage points. Two-thirds of this gap is accounted for by differences between students in the lowest compared to the middle income group (a difference, on average, of 7.8 percentage points); while the remaining one-third (on average, 3.7 percentage points) is due to the gap in dropout rates between students in the middle and highest income groups.

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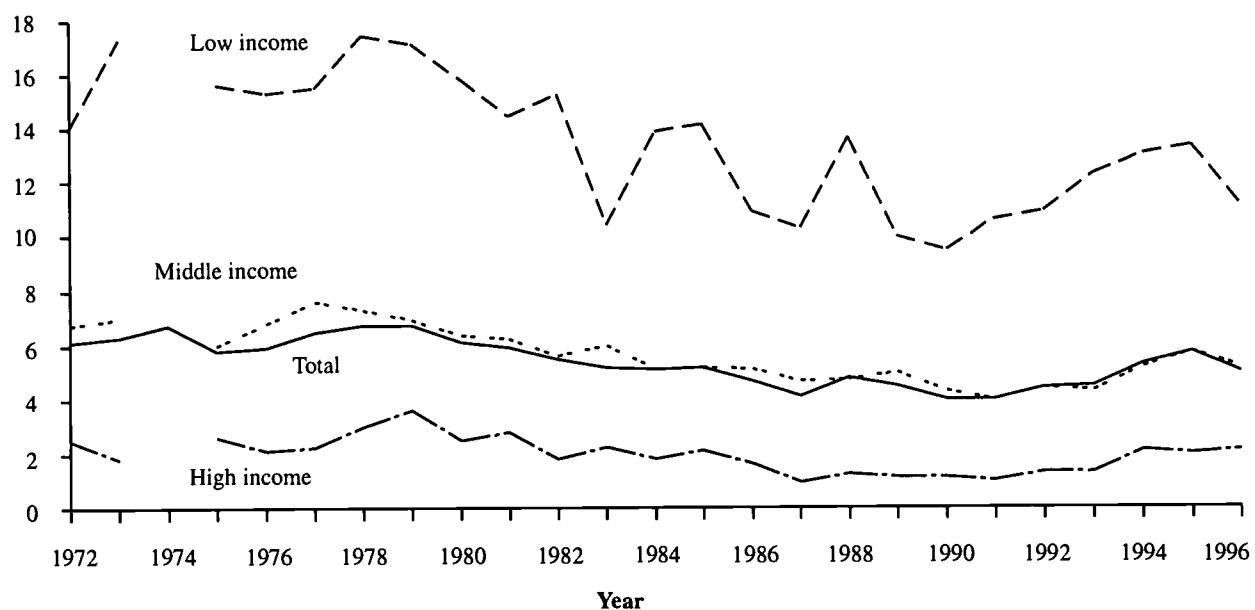
<sup>22</sup>For more in-depth coverage on the interaction of race-ethnicity with other factors, the interested reader is referred to G. Natriello, Ed., *School Dropouts: Patterns and Policies* (New York: Teachers College Press, 1987). For an excellent ethnographic depiction of these factors at work, see M. Fine, *Framing Dropouts* (New York: State University of New York Press, 1991).

## Age

In October of 1996, only 1 out of every 10 youths ages 15 through 24 enrolled in school was over age 18, but dropouts from this older group of students accounted for 1 out of every 4 high school dropouts in 1996. Thus, students who pursue a high school program beyond the traditional ages are at an increased risk of dropping out of school (table 2).

While the event dropout rates for younger enrollees are substantially lower (for example, only 3.5 percent for 15- and 16-year-olds and 3.4 percent for 17-year-olds), it is important to understand that 43 percent of all young adults who left school between October of 1995 and October of 1996 were ages 15, 16, and 17 in October of 1996. These youths left school short of a projected normal school completion. Understanding why these younger students, with presumably fewer career options, choose to leave school early is an important issue to resolve.

**Figure 2—Event dropout rates for grades 10–12, ages 15–24, by family income: October 1972 through October 1996**



NOTE: Data on family income are missing for 1974.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

**Table 2—Event dropout and persistence rates and number and distribution of dropouts from grades 10–12, ages 15–24, by age group: October 1996**

Age	Event dropout rate (percent)	School persistence rate (percent)	Number of dropouts (thousands)	Percent of all dropouts
Total	5.0	95.0	485	100.0
Age*				
15–16	3.5	96.5	100	20.5
17	3.4	96.6	110	22.6
18	5.9	94.1	151	31.1
19	8.9	91.1	64	13.3
20–24	23.7	76.3	61	12.5

\*Age when a person dropped out may be one year younger, because the dropout event could occur at any time over a 12-month period.

NOTE: Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

### *State Dropout Rates*

For the past four years, the Common Core of Data (CCD) universe collection at NCES has included a dropout component in the agency level nonfiscal data collection. Currently NCES, through the National Cooperative for Elementary and Secondary Statistics and the CCD collection, is working with states and school districts to develop this national database of public school dropout rates. The number of states participating with consistent data definitions and collection procedures has increased from 14 states plus the District of Columbia for school year 1991–92 to 17 states for school year 1992–93 and most recently to 29 states for school year 1994–95. Once all states are participating fully in this data collection, event data for sex, race–ethnicity, and for grades 7 through 12 will be aggregated at the state and national levels. In the 1995–96 school year collection, 44 states plus the District of Columbia submitted data to CCD for dropouts from the 1994–95 school year. Data from 29 states meet the quality and comparability levels necessary for publishing state level estimates that support valid cross-state comparisons. The middle case, or median, of the dropout rates for these states is 4.6 percent registered by Delaware, Indiana, and Rhode Island, with rates ranging from 2.5 percent in North Dakota to 10.3 percent in Nevada (table 3).

**Table 3—Membership, dropout counts, and event dropout rates for grades 9–12: 1994–95**

State	Dropout count	Membership	Dropout rate (%)
Alabama	12,525	201,157	6.2
Arkansas	6,248	128,052	4.9
California	63,881	1,449,436	4.4
Connecticut	6,290	128,561	4.9
Delaware	1,389	29,994	4.6
District of Columbia	1,879	17,752	10.6
Georgia	30,158	335,372	9.0
Hawaii	2,465	50,105	4.9
Indiana	13,183	288,370	4.6
Iowa	5,115	151,348	3.4
Kansas	6,594	130,789	5.0
Louisiana	7,549	213,337	3.5
Maine	1,863	56,764	3.3
Massachusetts	8,351	236,801	3.5
Minnesota	12,219	235,428	5.2
Mississippi	8,700	136,558	6.4
Missouri	17,637	250,168	7.1
Nebraska	3,737	83,958	4.5
Nevada	6,703	65,383	10.3
New Mexico	7,826	91,784	8.5
New York	31,992	777,488	4.1
North Dakota	906	36,120	2.5
Ohio	28,281	529,864	5.3
Oregon	10,656	149,309	7.1
Pennsylvania	20,992	514,633	4.1
Rhode Island	1,852	40,181	4.6
Texas	26,039	956,023	2.7
Utah	5,107	144,967	3.5
West Virginia	4,091	97,104	4.2
Wyoming	2,010	30,184	6.7

NOTE: All states except for Alaska, Kentucky, Michigan, Montana, New Hampshire, and Washington reported data. However, among the 44 states and the District of Columbia that reported dropouts, 29 states and the District of Columbia said they adhered exactly to the standard definition and collection procedures. The states that followed NCES definitions were: Alabama, Arkansas, California, Connecticut, Delaware, District of Columbia, Georgia, Hawaii, Indiana, Iowa, Kansas, Louisiana, Maine, Massachusetts, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Mexico, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, Texas, Utah, West Virginia, and Wyoming.

SOURCE: 1994–95 membership counts were obtained from the 1994–95 Public Elementary/Secondary School Universe Survey, Common Core of Data, National Center for Education Statistics. 1994–95 dropout counts were obtained from the 1995–96 Public Elementary/Secondary Agency Universe Survey, Common Core of Data, National Center for Education Statistics.

## Status Dropout Rates

The cumulative effect of hundreds of thousands of young adults leaving school each year without successfully completing a high school program translates into several million young adults who are out of school but lacking a high school credential. Each year over the last decade this number has exceeded 3 million.<sup>23</sup> In October of 1996 there were 3.6 million 16- through 24-year-olds who were not enrolled in a high school program and had not completed high school (table 4). Overall, 11.1 percent of the 32.5 million 16- through 24-year-olds in the U.S. in 1996 were in this group.

**Table 4—Rate and number of status dropouts, ages 16–24: October 1992 through October 1996**

	October				
	1992 <sup>1</sup>	1993 <sup>1</sup>	1994 <sup>1,2</sup>	1995 <sup>1,2</sup>	1996 <sup>1,2</sup>
Status dropout rate (percent)	11.0	11.0	11.5	12.0	11.1
Number of status dropouts (in thousands)	3,410	3,396	3,727	3,876	3,611
Population (in thousands)	30,944	30,845	32,560	32,379	32,452

<sup>1</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>2</sup>Numbers in these years may reflect changes in CPS due to newly instituted computer assisted interviewing and/or due to the change in the population controls to the 1990 Census-based estimates, with adjustment.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

Although only 7.3 percent of white young adults ages 16 through 24 were out of school without a high school credential in 1996, they account for 1.6 million of the 3.6 million dropouts (table 5). An additional 1.3 million Hispanic dropouts account for 29.4 percent of the Hispanic young adults in this age group. Moreover, 13 percent of black 16- through 24-year-olds add another 0.6 million young adults to the dropout count.

<sup>23</sup>For data from 1985–1991, see P. Kaufman and M. Frase, *Dropout Rates in the United States: 1989* (Washington D.C.: National Center for Education Statistics, U.S. Department of Education, NCES 90-659); P. Kaufman, M. McMillen, and D. Brady, *Dropout Rates in the United States: 1991* (Washington, D.C.: National Center for Education Statistics, U.S. Department of Education, NCES 92-129).

The 1996 status dropout rate of 11.1 percent is lower than the 1995 rate of 12.0 percent, and continues an overall pattern of decline in the status rate. This 1995 to 1996 decrease is reflected in the status dropout rates for white youths, which decreased from 8.6 percent in 1995 to 7.3 percent in 1996, but is not repeated in the case of blacks or Hispanics, whose dropout rates showed no significant changes between 1995 and 1996<sup>24</sup> (figure 3). In recent years, annual fluctuations in these data have made it difficult to interpret short-term comparisons. However, a time series analysis based on the annual data provides a framework for describing longer term patterns of change. Over the past 25 years, there has been an overall pattern of decline that, on average, amounts to a change of 0.13 percent per year.

#### *Race-Ethnicity*

Over the past quarter century, the status dropout rates for white young adults have persisted at levels lower than the rates observed for either black or Hispanic young adults (figure 3). However, over the time period, the percentages of white and black young adults out of school without a high school credential have declined by about 40 percent in each group. Since the dropout rates for black young adults have been higher than those for white young adults, the comparable rates of change have resulted in a narrowing of the gap between the rates for blacks and whites.

Hispanic young adults in the United States have not shared in this improvement. Over the last 25 years, close to one-third of the 16- through 24-year-old Hispanics in the United States were reported as out of school and lacking a high school credential.<sup>25</sup> The educational gap between Hispanic young adults compared to their black and white peers is made worse by the fact that taken as a group, Hispanic young adults without a high school credential have completed less schooling than black and white young adults in the same situation. For example, one-third of the Hispanic young adults in this group of dropouts have less than a 9th-grade education and one-half have less than a 10th-grade education (table 6). Comparable estimates for whites and blacks show that about one-tenth of the dropouts in each group have less than a 9th-grade education and about one-quarter have less than a 10th-grade education.

<sup>24</sup>For data from 1995, see M. McMillen, P. Kaufman, and S. Klein, *Dropout Rates in the United States: 1995* (Washington, D.C.: U.S. Department of Education, National Center for Education Statistics, 1997).

<sup>25</sup>See for example, F. Bennici and W. Strang, *An Analysis of Language Minority and Limited English Proficient Students from NELS:88* (Washington, D.C.: U.S. Department of Education, Office of Bilingual Education and Minority Language Affairs, August 1995); W. Strang, M. Winglee, and J. Stunkard, *Characteristics of Secondary-School-Age Language Minority and Limited English Proficient Youth* (Washington, D.C.: U.S. Department of Education, 1993); and P. Kaufman and M. McMillen, *Dropout Rates in the United States: 1990* (Washington, D.C.: U.S. Department of Education, National Center for Education Statistics, NCES 91-053).

**Table 5—Rate, number, and distribution of status dropouts, ages 16–24, by sex, race-ethnicity, income, and region: October 1996**

Characteristics	Status dropout rate	Number of status dropouts (in thousands)	Population (in thousands)	Percent of all dropouts	Percent of population
Total	11.1	3,611	32,452	100.0	100.0
Sex					
Male	11.4	1,854	16,296	51.3	50.2
Female	10.9	1,757	16,156	48.7	49.8
Race-ethnicity <sup>1</sup>					
White, non-Hispanic	7.3	1,569	21,527	44.8	66.3
Black, non-Hispanic	13.0	615	4,745	17.6	14.6
Hispanic	29.4	1,315	4,481	37.6	13.8
Family income <sup>2</sup>					
Low income level	22.1	1,398	6,322	38.7	19.5
Middle income level	10.8	2,025	8,804	56.1	57.9
High income level	2.6	188	7,326	5.2	22.6
Region					
Northeast	8.3	482	5,816	13.4	17.9
Midwest	7.7	589	7,623	16.3	23.5
South	13.0	1,505	11,582	41.7	35.7
West	13.9	1,035	7,430	28.7	22.9

<sup>1</sup>Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

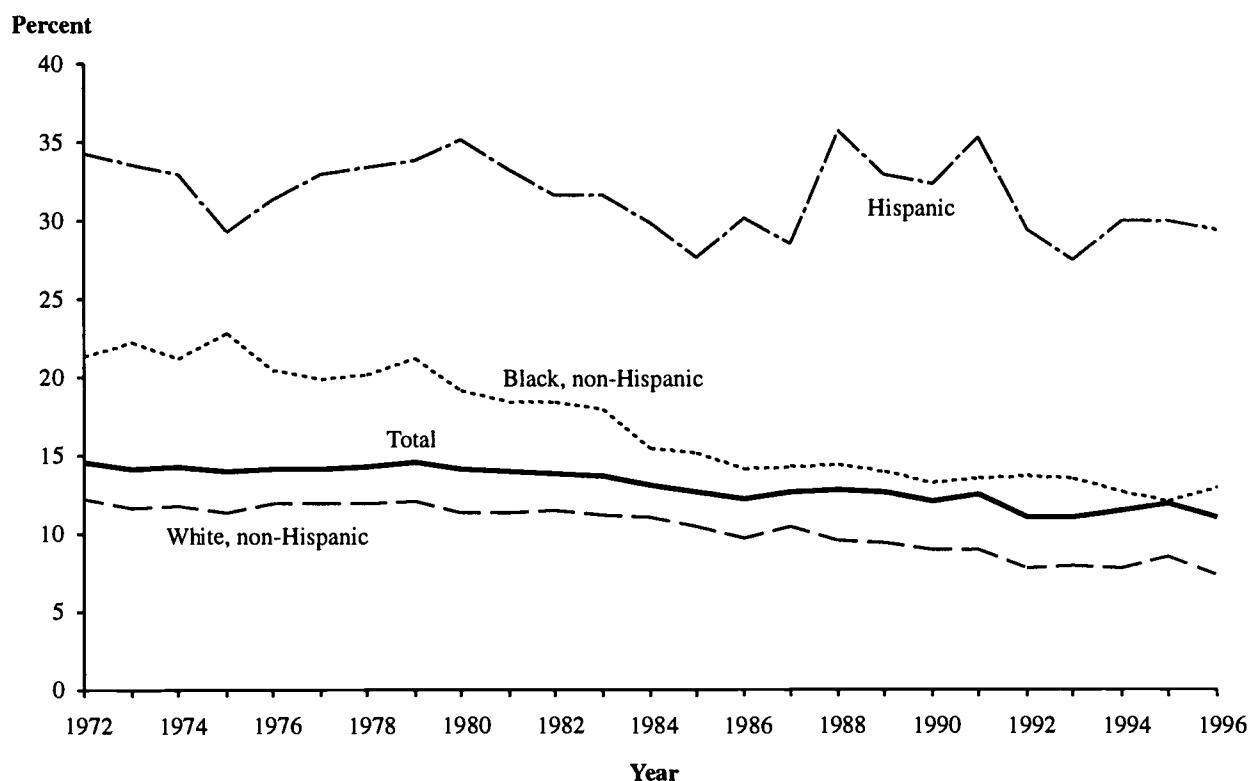
<sup>2</sup>Low income is defined as the bottom 20 percent of all family incomes for 1996; middle income is between 20 and 80 percent of all family incomes; and high income is the top 20 percent of all family incomes.

NOTE: Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

**Figure 3—Status dropout rates for persons ages 16–24, by race–ethnicity: October 1972 through October 1996**

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SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

**Table 6—Percentage distribution of status dropouts, ages 16–24, by level of schooling attained and race–ethnicity: October 1996**

Level of schooling attained	Total	Race–ethnicity*		
		White, non-Hispanic	Black, non-Hispanic	Hispanic
Total	100.0	100.0	100.0	100.0
Level of schooling attained				
Less than 1st grade	1.4	0.9	0.3	2.1
1st, 2nd, 3rd, or 4th grade	2.3	0.7	0.6	5.2
5th or 6th grade	5.8	0.1	1.1	15.5
7th or 8th grade	<u>10.8</u>	11.2	8.0	11.9
Less than 9th grade	20.3	12.9	10.0	34.7
9th grade	<u>17.7</u>	16.2	15.4	20.7
Less than 10th grade	38.0	29.1	25.4	55.4
10th grade	22.6	27.1	28.5	14.1
11th grade	29.7	35.5	34.8	20.4
12th grade, without diploma	9.7	8.4	11.4	10.3

\*Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

NOTE: Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

### *Hispanic Dropout Rates*

Earlier reports that the higher Hispanic dropout rates are in part attributable to high dropout rates among Hispanic immigrants are substantiated with data from 1996 (table 7).<sup>26</sup> In fact, the status dropout rate of 44.1 percent for Hispanic 16- through 24-year-olds born outside the 50 states and the District of Columbia is double the rates of 16.7 percent registered for Hispanic youths with at least one parent born in the United States and 22 percent registered for Hispanic youths with both parents born in the United States. While these dropout rates for Hispanic youths born in the United States are lower than the dropout rate for foreign-born Hispanic youths, they are still higher than the dropout rates registered for black or white young adults, leaving a larger share of the group of Hispanic young adults ill-prepared to compete for skilled or technical jobs in today's economy.

<sup>26</sup>P. Kaufman, M. McMillen, and D. Bradby, *Dropout Rates in the United States: 1991* (Washington, D.C.: U.S. Department of Education, National Center for Education Statistics, NCES 92-129).

**Table 7—Rate and number of status dropouts, ages 16–24, by recency of migration and ethnicity: October 1996**

Recency of migration	Status dropout rate	Number of dropouts (in thousands)	Ethnicity	
			Hispanic	Non-Hispanic
Total <sup>1</sup>	11.1	3,611	29.4	8.2
Born outside 50 states and D.C.	25.3	939	44.1	6.4
First generation <sup>2</sup>	9.4	312	16.7	3.2
Second generation or more <sup>3</sup>	9.3	2,361	22.0	8.7

<sup>1</sup>Total includes a small proportion for whom place of birth is unknown.

<sup>2</sup>Individuals defined as first generation were born in the 50 states or the District of Columbia and have one or both parents born outside the 50 states and the District of Columbia.

<sup>3</sup>Individuals defined as second generation or more were born in the 50 states or the District of Columbia and have both parents born in the 50 states or the District of Columbia.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996.

Data from 1995 show that over half of the foreign-born Hispanic youths who were counted as dropouts never enrolled in a U.S. school, and 80 percent of these young adults were reported as either speaking English “not well” or “not at all.”<sup>27</sup> Some of the young Hispanic immigrants who do not enroll in school in the U.S. may have entered the U.S. beyond what is considered “normal” high school age, and some may have come to the U.S. in search of employment rather than education. But the data also suggest that language may be a barrier to participation in U.S. schools. Regardless of the reasons that resulted in a large proportion of Hispanic young adults not having a high school credential, the impact is the same; whether they were born in the 50 states and the District of Columbia or elsewhere and whether or not they enrolled in U.S. schools, these young adults do not have the basic level of education that is thought to be essential in today’s economy.

#### *Income*

The patterns described for event dropout rates and income levels are repeated in the status dropout rates. In 1996, there was almost a 20-percentage-point gap between status dropout rates for the lowest and highest income groups (table 8). Youths from families with the

<sup>27</sup>See tables 16 and 20, M. McMillen, P. Kaufman, and S. Klein. *Dropout Rates in the United States: 1995* (Washington, D.C.: U.S. Department of Education, National Center for Education Statistics, NCES 97-473). The English-speaking ability is based on the reports of a household respondent rather than reports from each individual in the household. These data on the ability to speak English are limited to young adults who were reported as speaking Spanish at home.

lowest incomes were eight times as likely as their peers from families with high incomes to be out of school without a high school credential.

The clear differences in the distribution of dropout rates across racial-ethnic groups and clear differences in the distribution of dropout rates across income levels lead to questions about the relationship between racial-ethnic group membership, income levels, and dropout rates. As reported in past years, within each racial-ethnic group, status dropout rates are lowest at the highest income levels and highest at the lowest income levels.

Despite these patterns, differences between racial-ethnic groups persist within income levels (table 8). Although Hispanic young adults from families with low and middle incomes are more likely to drop out than Hispanic youth from families with high incomes, Hispanic young adults at each income level are more likely to drop out than white and black youths at the same income levels. Comparisons of dropout rates for white and black youths at each income level show that at the middle and high income levels the dropout rates for black and white youths are comparable. However, black young adults at the low income level do not fare as well as their white peers. White and black youths in families with low incomes are more likely to drop out than their peers in families with higher incomes, but the risk is greater for black youths (21.9 percent for blacks versus 13.9 percent for whites).

**Table 8—Status dropout rate, ages 16–24, by income and race–ethnicity: October 1996**

Family income	Total	Race–ethnicity <sup>1</sup>		
		White, non-Hispanic	Black, non-Hispanic	Hispanic
Total	11.1	7.3	13.0	29.4
Family income <sup>2</sup>				
Low income level	22.1	13.9	21.9	42.4
Middle income level	10.8	8.3	9.0	24.9
High income level	2.6	2.0	2.5	11.0

<sup>1</sup>Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

<sup>2</sup>Low income is defined as the bottom 20 percent of all family incomes for 1996; middle income is between 20 and 80 percent of all family incomes; and high income is the top 20 percent of all family incomes.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

The 5.7 percentage-point difference between the rates for blacks and whites is, in part, due to the differences evident in the dropout rates for white and black youths at the lowest income levels; but the size of this gap is also driven by differences in the population distribution across the income levels. Relatively more white than black youths live in families in the highest income group (28.6 percent versus 9.7 percent), while a larger share of black than white youths live in families in the lowest income group (35.7 percent versus 13.3 percent) (table 9). As a result, a larger portion of black youths are at the increased risk of dropping out observed in the low income group (21.9 percent for blacks) and a larger portion of white youths experience the decreased risk of dropping out observed in the high income group (2.0 percent for whites).

**Table 9—Percentage of persons, ages 16–24, by race–ethnicity and income: October 1996**

Family income	Race–ethnicity <sup>1</sup>		
	White, non-Hispanic	Black, non-Hispanic	Hispanic
<b>Family income<sup>2</sup></b>			
Low income level	13.3	35.7	31.5
Middle income level	58.1	54.6	60.7
High income level	28.6	9.7	7.9

<sup>1</sup>Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

<sup>2</sup>Low income is defined as the bottom 20 percent of all family incomes for 1996; middle income is between 20 and 80 percent of all family incomes; and high income is the top 20 percent of all family incomes.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

### *Geographic Region*

Historically, geographic regions have been another area of interest in efforts to understand patterns and trends in dropout rates. Similar to findings in 1995, the high status dropout rates of 13.0 percent in the South and 13.9 percent in the West are at least one and one-half times the rates of 8.3 percent in the Northeast and 7.7 percent in the Midwest (table 5). When these dropout rates are reviewed across regions for each racial–ethnic group, the dropout rates for Hispanics exceed the national dropout rates in each region, but there is no clear pattern for Hispanics across regions (table 10). The rates for black youths are on a par with the national average in each region except the West. Black youths in the West have dropout rates lower than the national average and lower than the dropout rates for black youths in each other region of the country. The rates for white youths are lower than the national averages in each region. But the rates for white youths in the South are higher than the rates experienced by white youths in each

of the other regions. The South is the only region in which the dropout rate for white youths exceeds the national dropout rate for white youths (10.0 percent versus 7.3 percent).

**Table 10—Status dropout rate, ages 16–24, by region and race–ethnicity: October 1996**

Region	Total	Race–ethnicity*		
		White, non-Hispanic	Black, non-Hispanic	Hispanic
Total	11.1	7.3	13.0	29.4
<b>Region</b>				
Northeast	8.3	5.1	11.8	24.1
Midwest	7.7	5.8	12.6	31.0
South	13.0	10.0	14.6	25.1
West	13.9	7.2	4.1	34.3

\*Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

Taken together, these patterns suggest that the higher rates evident in the West are partially driven by the high dropout rate for Hispanic youths.<sup>28</sup> Even though the dropout rate for white youths in the South is lower than the dropout rates for black and Hispanic youths in the South, the fact that it is the highest regional dropout rate for whites suggests that the greatest challenge to further lowering the white dropout rate lies in the South.

### Cohort Dropout Rates

Longitudinal studies follow the experiences that a **cohort** of students share as they progress through school. This type of study provides an opportunity to examine in more detail questions about who drops out, the life circumstances of dropouts, the factors that influence the decisions to drop out of high school, and the experiences young adults encounter after leaving school. The NELS:88 started with the cohort of students who were in the eighth grade in the

<sup>28</sup>The elevated dropout rate in the West is also influenced by the relatively large proportion of Hispanic youths in that region.

1987-88 school year.<sup>29</sup> Subsequently, these students were re-interviewed at two-year intervals through 1994.

The cohort dropout rates for the eighth-grade class of 1988 show that by the spring of 1992, 10.8 percent of the 1988 cohort of eighth graders were out of school and had not completed a high school program (table 11). Some of these dropouts completed a high school program over the following summer, so that by August of 1992 the size of this group was 10.1 percent. By August of 1994, only 7.2 percent of the cohort remained as dropouts.

**Table 11—NELS:88 8th- to 12th-grade cohort dropout rates, by sex and race-ethnicity: 1992 and 1994**

Characteristics	Cohort dropout rate			
	Spring 1990-92 <sup>1</sup>	Spring 1988-92	August 1988-92	August 1988-94
Total	7.1	10.8	10.1	7.2
Sex				
Male	6.9	10.3	9.8	7.5
Female	7.4	11.3	10.4	6.9
Race-ethnicity <sup>2</sup>				
Asian/Pacific Islander	3.9	4.9	4.3	5.1
Hispanic	12.2	17.8	17.9	14.3
Black, non-Hispanic	9.1	13.4	12.7	8.4
White, non-Hispanic	5.9	9.1	8.3	5.7
Native American	22.3	30.4	30.4	16.9

<sup>1</sup>The denominator for this rate includes the members of the 1988 eighth-grade cohort who were still enrolled in school in the spring of 1990; excluded are students who dropped out between 1988 and 1990 and students who migrated out of the country or died.

<sup>2</sup>Not shown separately are 434 persons (approximately 2 percent of the unweighted sample) whose race-ethnicity is unknown.

NOTE: This table is based on the core cohort of eighth graders (i.e., this sample excludes students in the base year sample whose sex, race, and dropout status were determined through the Followback Study of Excluded Students). As such, numbers may differ from earlier reports.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988 Base Year, First, Second, and Third Follow-up Survey, 1988, 1990, 1992, and 1994, unpublished data.

<sup>29</sup>For more information, see S. Ingels, S. Abraham, K. Kasinski, R. Karr, B. Spencer, M. Frankel, and J. Owings, *NELS:88 Base Year Data File User's Manual* (Washington, D.C.: Student Component: March 1990, NCES 90-494; Parent Component: March 1990, NCES 90-466; School Component: March 1990, NCES 90-482; and Teacher Component, March 1990, NCES 90-484); and B. Spencer, M. Frankel, S. Ingels, K. Rasinski and R. Tourangeau, *NELS:88 Base Year Sample Design Report* (Washington, D.C.: NCES 90-463, 1990).

Analysis of the outcomes experienced by these dropouts shows that relative to their peers who completed high school, they were less likely to participate in postsecondary education; on average, they earned lower incomes; and they were also more likely to make early transitions into adult roles—to have children or marry or live in marriage-like arrangements.<sup>30</sup>

Comparisons can also be drawn across cohorts measured at the same point in their school careers but in different years. The NELS:88 also included a nationally representative sample of sophomores in 1990; these students were re-interviewed in 1992 and 1994. Comparable data were collected for sophomores in 1980 in the HS&B study; these students were re-interviewed in 1982 and 1984.

A comparison of cohort dropout rates from the 1980 and 1990 sophomore classes shows that 9.9 percent of the students who were sophomores in 1980 were high school dropouts by August of the 1981–82 school year (table 12).<sup>31</sup> For the sophomore class of 1990, the cohort dropout rate was lower, with 5.6 percent of the students who were counted as sophomores in 1990 counted as dropouts by August of the 1991–92 school year.<sup>32</sup> This amounts to a 43 percent reduction in the sophomore to senior dropout rate over the decade.<sup>33</sup>

Decreases in dropout rates were widespread, with a number of different groups of students sharing in the decline. Dropout rates decreased for both male and female students, for white, black, and Hispanic students, for students living in intact families and non-intact families, and for students with children of their own living in their household. At the same time, students in poverty and with relatively poor academic achievement seem to be left untouched by the combination of factors that led to lower dropout rates over the 10-year period. Sophomores with these characteristics dropped out at comparable rates in 1980 and 1990.<sup>34</sup>

<sup>30</sup>M. McMillen, P. Kaufman and S. Whitener, *Dropout Rates in the United States: 1993* (Washington D.C.: U.S. Department of Education, National Center for Education Statistics, NCES 94-669, 1993).

<sup>31</sup>Previous analyses of the HS&B data from the spring 1982 follow-up counted students who had enrolled in alternative programs to prepare for a high school equivalency test or had completed high school by an alternative means as dropouts. See S.M. Barro and A. Kolstad, *Who Drops Out of High School? Findings from High School and Beyond* (1987); and A. Pallas, "School Dropouts in the United States" (issue paper, U.S. Department of Education, National Center for Education Statistics, 1987). The analysis presented here treats these youths as students or completers.

<sup>32</sup>M. McMillen and P. Kaufman, *Dropout Rates in the United States: 1994* (Washington D.C.: U.S. Department of Education, National Center for Education Statistics, NCES 96-863, 1996).

<sup>33</sup>In both HS&B and NELS:88, a subset of students who were not considered capable of completing the questionnaire were deemed ineligible for participation in the study. Inasmuch as no attempt was made to identify and include data from students deemed ineligible in the 1980 HS&B cohort, analyses that compare NELS:88 sophomores with HS&B sophomores do not include data reflecting the experiences of the ineligible students in NELS:88. The option for school coordinators to determine some students ineligible led to the exclusion of an unknown number of language minority and limited English proficient students in HS&B. In NELS:88 however, a Spanish-language questionnaire was administered to those members of the sophomore cohort who preferred to take this version of the questionnaire.

<sup>34</sup>P. Kaufman, M. McMillen and D. West, *A Comparison of High School Dropout Rates in 1982 and 1992* (U.S. Department of Education, NCES 96-893).

**Table 12—HS&B and NELS:88 10th- to 12th-grade cohort dropout rates, by demographic characteristics: August 1982 and 1992**

Status in 10th grade	Cohort dropout rate	
	HS&B 1980-82	NELS:88 1990-92
Total	9.9	5.6
Sex		
Male	11.0	5.2
Female	9.0	6.0
Race-ethnicity*		
Asian/Pacific Islander	2.2	4.6
Hispanic	16.8	10.9
Black, non-Hispanic	11.3	7.6
White, non-Hispanic	8.8	4.3
Native American	25.1	18.2
Family below poverty level		
Yes	13.0	10.9
No	6.1	3.6
Family composition		
Intact family	5.5	4.2
Two adults/step-parents	12.9	7.9
Single parent	11.0	7.4
Other	19.8	10.4
Own child in home		
Yes		
Male	19.4	6.8
Female	33.0	18.3
No		
Male	8.3	5.1
Female	7.0	5.5

\*Not shown separately are those included in the total whose race-ethnicity is unknown.

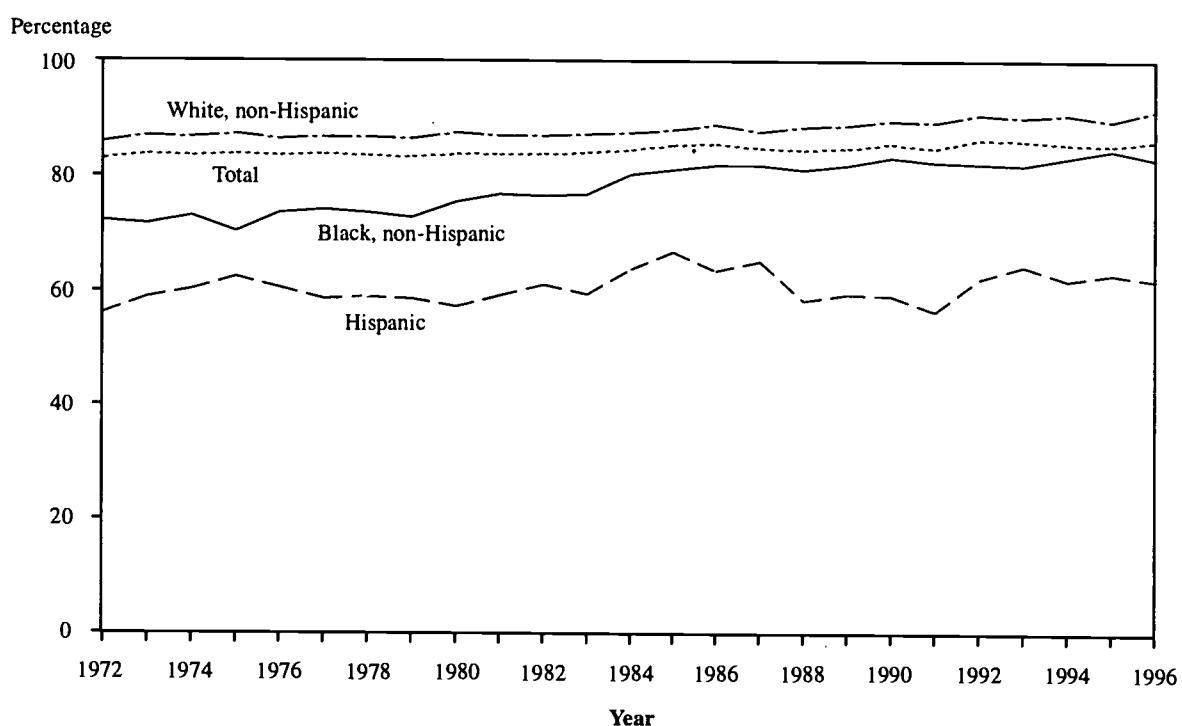
NOTE: See the technical appendix for the definitions of poverty and family composition used in these tables.

SOURCES: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, Sophomore Cohort, First Follow-up Survey, 1982, unpublished data. U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988 First and Second Follow-up Surveys, 1990 and 1992, unpublished data.

## HIGH SCHOOL COMPLETION RATES

The relative importance of a high school education has changed dramatically over the last half century in the United States. When the grandparents of today's high school students entered adulthood, a high school education was an asset in the labor force, held by about half of the population ages 25 through 29 in 1950.<sup>35</sup> By the early 1970s, when the parents of today's high school students entered the work force, about 83 to 84 percent of the population ages 18 through 24 not enrolled in high school had completed a high school education (figure 4 and table A24). At that point in time, a high school education still served as an entryway to a number of promising career paths. Now, a quarter of a century later, technological advances in the workplace have increased the demand for skilled labor to the point where a high school education serves more as a minimum requirement for entry to the labor force. The completion of a high school education is even more essential, whether it serves as a basis for entry into additional education and training or as an entry into the labor force.

**Figure 4—Completion rates for persons ages 18–24 not currently enrolled in high school or below, by race–ethnicity: October 1972 through October 1996**



SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

<sup>35</sup>*Digest of Education Statistics: 1996* (Washington, D.C.: National Center for Education Statistics, U.S. Department of Education, NCES 96-133).

## Completion Rates

Despite the increased importance of a high school education, the high school completion rate for the country has been static over the last quarter century.<sup>36</sup> The rate fluctuated around 84 percent between 1973 and 1983, moved up slightly between 1983 and 1992, and has been at about 86 percent since 1992. This net increase of about 2 percent is not very encouraging.

### *Race-Ethnicity*

High school completion rates analyzed within each racial-ethnic group show different patterns (figure 4 and Table A24). About 86 to 87 percent of white young adults were completing their high school education in the 1970s, and by 1996 the high school completion rate for white young adults increased to 91.5 percent (table 13). In contrast, between 70 and 74 percent of black young adults were completing their high school education in the 1970s, but this rate increased for black young adults during the 1980s and has fluctuated between 82 and 84 percent during the 1990s. A lower percentage of Hispanic young adults complete high school programs—about 62 percent of all Hispanic 18- through 24-year-olds in the United States in 1996 had completed a high school program. Although there have been some year-to-year fluctuations over the last 25 years, the pattern for Hispanics is relatively unchanged.

### *Income and Regions*

These race-ethnicity differences mirror the pattern of differences noted in the status dropout rates. The same is true when high school completion rates are examined within income levels and geographic regions. When dropout and high school completion rates are compared across income levels, young adults in families with high incomes are the least likely to drop out of high school (2.6 percent in 1996) (table 5) and the most likely to complete a high school education—in fact, 96.9 percent of the 18- through 24-year-olds in high income families and not still enrolled in high school had completed a high school program in 1996 (table 14). Conversely, young adults in families with low incomes are the most likely to drop out of high school (22.1 percent in 1996), and the least likely to complete a high school education—only about three-quarters of low income youths in this age group who were out of school had completed a high school education. Similarly, young adults in the Northeast and Midwest had lower dropout rates and higher high school completion rates compared to their contemporaries living in the South and West.

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<sup>36</sup>The high school completion rate is based on the population of young adults ages 18 through 24 who are not still enrolled in school; the status dropout rate is based on the population ages 16 through 24. Thus, the age range of the status dropout rate is two years wider, and those 18- through 24-year-olds who are still enrolled in a high school program are excluded from the calculation of the high school completion rate. Because of these differences, the status dropout rate and the high school completion rate are not the simple inverse of each other.

**Table 13—High school completion rates and method of completion of 18- through 24-year-olds not currently enrolled in high school or below, by race-ethnicity: October 1988 through October 1996**

Completion Method	Year								
	1988	1989	1990	1991	1992 <sup>2</sup>	1993 <sup>2,3</sup>	1994 <sup>2,3</sup>	1995 <sup>2,3</sup>	1996 <sup>2,3</sup>
(percent)									
Total <sup>1</sup>									
Completed	84.5	84.7	85.6	84.9	86.4	86.2	85.8	85.3	86.2
Graduated	80.3	80.5	80.6	80.7	81.2	81.2	78.8	77.5	76.4
Alternative	4.2	4.2	4.9	4.2	5.2	4.9	7.0	7.7	9.8
White, non-Hispanic									
Completed	88.7	89.0	89.6	89.4	90.7	90.1	90.7	89.8	91.5
Graduated	84.4	85.1	84.8	85.2	85.7	85.5	84.2	82.6	81.0
Alternative	4.2	3.9	4.8	4.2	5.0	4.7	6.4	7.2	10.5
Black, non-Hispanic									
Completed	80.9	81.9	83.2	82.5	82.0	81.9	83.3	84.5	83.0
Graduated	76.1	76.9	77.9	77.3	75.9	76.1	75.2	75.4	73.0
Alternative	4.8	5.0	5.3	5.2	6.1	5.8	8.1	9.0	10.0
Hispanic									
Completed	58.2	59.4	59.1	56.5	62.1	64.4	61.8	62.8	61.9
Graduated	54.4	54.8	54.8	53.4	56.6	58.2	54.2	54.0	55.2
Alternative	3.8	4.7	4.2	3.1	5.5	6.1	7.6	8.8	6.7

<sup>1</sup>Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

<sup>2</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>3</sup>Numbers in these years reflect changes in CPS due to newly instituted computer-assisted interviewing and/or due to the change in the population controls to the 1990 Census-based estimates, with adjustment.

NOTE: Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

**Table 14—Completion rates and number and distribution of completers, ages 18–24, not currently enrolled in high school or below, by sex, race–ethnicity, income, and region: October 1996**

	Completion rate (percent)	Number of completers (thousands)	Percent of all completers
Total	86.2	20,074	100.0
Sex			
Male	85.7	9,805	48.8
Female	86.8	10,269	51.2
Race–ethnicity <sup>1</sup>			
White, non-Hispanic	91.5	14,266	75.3
Black, non-Hispanic	83.0	2,669	14.1
Hispanic	61.9	1,998	10.6
Family income <sup>2</sup>			
Low income level	74.5	3,639	19.1
Middle income level	86.6	11,677	57.1
High income level	96.9	4,759	23.9
Region			
Northeast	89.4	3,703	18.4
Midwest	90.4	4,873	24.3
South	84.1	6,978	34.8
West	82.8	4,513	22.5

<sup>1</sup>Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

<sup>2</sup>Low income is defined as the bottom 20 percent of all family incomes for 1994; middle income is between 20 and 80 percent of all family incomes; and high income is the top 20 percent of all family incomes.

NOTE: Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

#### *Completion Rates by State Within Regions*

Often interest in geographic comparisons extends beyond the regional level to state-specific data. In order to compare high school completions on a state-by-state basis, completion rates are computed based on data spanning a three-year period. The resulting state-specific

completion rates represent the averages experienced over the three-year periods of 1991-93 and 1994-96.<sup>37</sup> In looking at these data, it should be noted that the survey respondents may have attended school in a different state from where they lived at the time of the 1996 interview.

These data show considerable state-by-state variation (table 15). Using the 1994-96 three-year average, the national mean is 85.8 percent, with the average completion rates ranging from 78.6 percent in California to 96.1 percent in Connecticut. Viewed from this perspective, state-by-state data within regions of the country show that there are regional differences in both the level of the average rates and range of variation in the rates.

Figure 5 displays the range and medians for each of the four regions. There is a clear overlap in the rates across the regions, with some of the states in each region with average annual rates between 87.7 and 92.6 percent. While the high rates in each region are not appreciably different from one another, state-specific high school completion rates in the South and West are more likely to be lower than state level high school completion rates in the Northeast and Midwest. In fact, the lowest 16 completion rates each occur in states in the South and West. Furthermore, the lowest rates in the Northeast and Midwest are similar to the median rates in the South and West.

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<sup>37</sup>The sample sizes of the numbers of completers at the state level are, by definition, substantially smaller than the counts of completers supporting the national estimates (but appreciably larger than the counts of dropouts). To improve the stability of the state level estimates for high school completion rates, the rates are displayed as three-year averages (for example, the data for 1992 represent the average of the data from 1991, 1992, and 1993 and the data for 1995 are based on averages of the data from 1994, 1995, and 1996). Even with this, sampling variability is increased substantially, especially in states with relatively smaller populations in the 18 through 24 age range.

**Table 15—High school completion rates of 18- through 24-year-olds not currently enrolled in high school or below, by state: October 1991–93 and 1994–96**

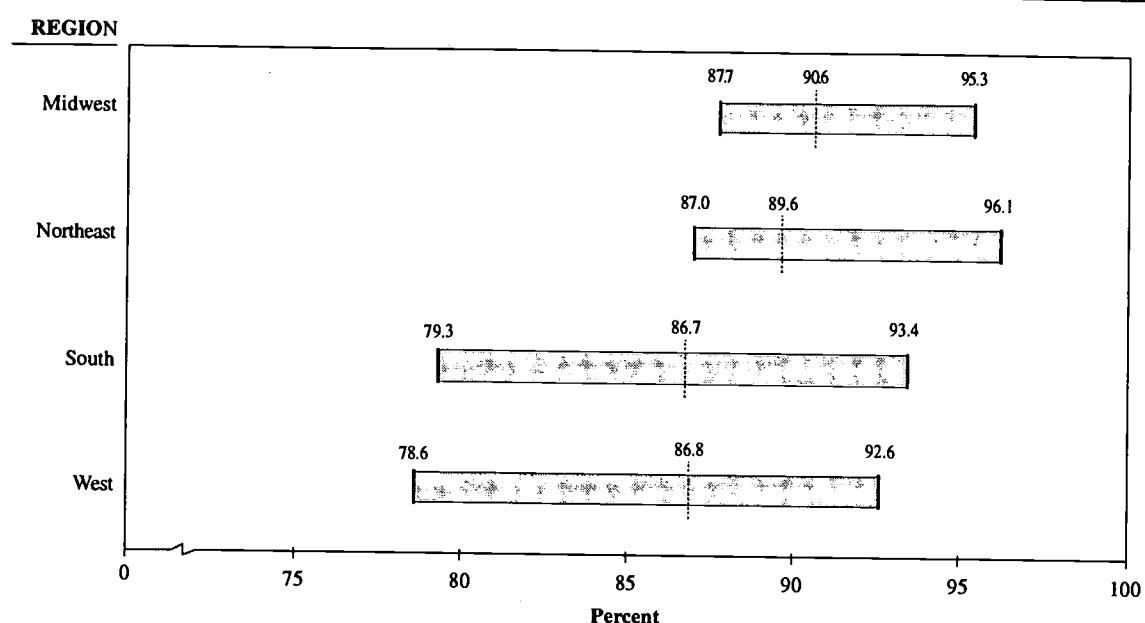
State		1991–93*	1994–96*
TOTAL		85.7	85.8
NORTHEAST	Connecticut	90.9	96.1
	Maine	93.4	91.8
	Massachusetts	90.5	92.0
	New Hampshire	89.0	87.7
	New Jersey	89.8	87.0
	New York	87.6	90.9
	Pennsylvania	90.5	89.6
MIDWEST	Rhode Island	90.4	87.5
	Vermont	89.6	87.0
	Illinois	86.0	89.3
	Indiana	87.4	88.3
	Iowa	94.0	91.6
	Kansas	91.4	91.6
	Michigan	88.3	89.1
SOUTH	Minnesota	91.7	95.3
	Missouri	88.3	88.0
	Nebraska	92.5	93.3
	North Dakota	95.7	93.0
	Ohio	89.7	87.7
	South Dakota	91.2	89.6
	Wisconsin	92.4	92.5
	Alabama	81.0	86.8
	Arkansas	87.7	86.7
	Delaware	90.3	88.8
	Florida	84.5	80.1
	Georgia	81.9	81.3
	Kentucky	82.6	82.2
	Louisiana	82.5	82.2
WEST	Maryland	91.0	93.4
	Mississippi	88.6	83.9
	North Carolina	84.2	87.2
	Oklahoma	81.8	87.0
	South Carolina	85.5	88.4
	Tennessee	77.5	83.3
	Texas	81.2	79.3
	Virginia	89.8	86.6
	Washington, D.C.	87.2	87.8
	West Virginia	84.6	89.3
	Alaska	89.0	87.8
	Arizona	81.1	85.8
	California	78.2	78.6
	Colorado	87.2	87.9

\*Numbers on this table reflect 3-year averages.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

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**Figure 5—State-specific high school completion rates of 18- through 24-year-olds not currently enrolled in high school or below, minimum, maximum, and median, by region: 1994-96**



SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

### Methods of Completion

Recall that the data in table 13 show that by October of 1996, some 86.2 percent of the 18- through 24-year-olds who were not still enrolled in high school held high school credentials. Most of these young adults attended high school, completed the required secondary school coursework, and graduated with a regular diploma. In 1996, 76.4 percent of the 18- through 24-year-olds who were not still enrolled in high school held regular diplomas. The high school graduation rate, as opposed to the high school completion rate, is based on students receiving a regular diploma; thus, the 1996 high school graduation rate is 76.4 percent (table 13).

Not all young adults follow a direct path to high school graduation. As the dropout rates show, each year over the last decade 300 to 500 thousand 10th through 12th graders left school without a high school diploma. Some of them return to school and earn a regular high school diploma. Others use the knowledge acquired while they were in school, perhaps in combination with skills and knowledge from their post-high school experiences or alternatively through special study programs, to take and pass a high school equivalency examination.<sup>38</sup>

<sup>38</sup>The General Educational Development (GED) test is the principal equivalency exam in use at this time. In 1994, about 680,000 people age 16 or older took the GED test, and 73 percent or nearly a half million passed the exam to earn a high school credential. GED Testing Service, "Who Took the GED? 1994 GED Statistical Report" (Washington D.C.: American Council on Education, 1995).

In 1996, 2 million young adults 18 through 24 years of age had earned high school credentials by passing an equivalency exam such as the General Educational Development (GED) test.<sup>39</sup> The young adults who completed high school through this alternative route account for 9.8 percent of the 18- through 24-year-olds who were not still enrolled in high school in 1996 (table 13).

CPS data indicating whether high school credentials were obtained through regular graduation or through an alternative route were first collected in 1988. Between 1988 and 1993, the graduation rate fluctuated between 80 and 81 percent, and the alternative completion rate fluctuated between 4 and 5 percent. Since 1993 the graduation rate decreased nearly 5 percentage points to the 1996 rate of 76.4 percent, and the alternative completion rate increased by the same amount (4.9 percentage points) (table 13).<sup>40</sup>

#### *Race-Ethnicity*

These trends are repeated between 1992 and 1996 in the graduation and alternative completion rates for white and black young adults. In both groups, the percentage point decrease in the graduation rate was offset by a commensurate increase in the alternative completion rate. For white young adults, a 5-percentage-point drop in the high school graduation rate coincided with a 6-percentage-point gain in the alternative completion rate; and for black young adults, the graduation rate decreased by 3 percentage points, while the alternative completion rate increased by 4 percentage points.

Throughout the 1992 through 1996 period, the high school completion rates were relatively stable within each group. As a result, these trends represent a shift, albeit small, from regular high school graduation to alternative completions.

#### *Region*

These changing patterns are widespread. In both the Midwest and the South, graduation rates decreased by 5 percentage points between 1992 and 1996, and alternative completion rates increased by about the same amount. The pattern is less clear in the Northeast and the West, where changes in both rates were smaller (on the order of 2 to 3 percentage points). By 1996, about 10 percent of the 18- through 24-year-olds who were not still in school held alternative credentials. In the West, the percent with alternative credentials was up to 8.5 percent; and in the Northeast, the alternative completion rate was 7.3 percent (table 16).

<sup>39</sup>In the CPS data there may be some ambiguity concerning students who complete high school with a certificate of attendance. While they should be counted as non-completers, some respondents may report them as completers when asked about educational attainment.

<sup>40</sup>As noted in Technical Appendix B, the rate increase from 1993 to 1994 coincided with the CPS implementation of CATI procedures. However, the rate has continued to increase in 1995 and 1996.

**Table 16—High school completion rates and method of completion of 18- through 24-year-olds not currently enrolled in high school or below, by region: October 1988 through October 1996**

Completion Method	Year								
	1988	1989	1990	1991	1992 <sup>1,2</sup>	1993 <sup>1,2</sup>	1994 <sup>1,2</sup>	1995 <sup>1,2</sup>	1996 <sup>1,2</sup>
<b>Total</b>									
Completed	84.5	84.7	85.6	84.9	86.4	86.2	85.8	85.3	86.2
Graduated	80.3	80.5	80.6	80.7	81.2	81.2	78.8	77.5	76.5
Alternative	4.2	4.2	4.9	4.2	5.2	4.9	7.0	7.7	9.8
<b>Northeast</b>									
Completed	87.5	88.5	89.3	89.3	89.6	89.4	89.6	89.6	89.5
Graduated	83.8	85.3	85.2	85.7	85.0	85.2	83.8	83.0	82.2
Alternative	3.7	3.2	4.0	3.7	4.5	4.3	5.8	6.6	7.3
<b>Midwest</b>									
Completed	88.7	89.3	89.1	88.3	90.5	89.0	90.9	88.9	90.4
Graduated	85.4	85.9	84.0	84.4	85.7	85.3	85.4	82.4	80.6
Alternative	3.3	3.4	5.1	3.9	4.7	3.7	5.5	6.3	9.8
<b>South</b>									
Completed	81.9	81.6	82.8	82.8	84.6	84.0	83.1	82.8	84.1
Graduated	77.3	77.0	78.8	77.9	79.1	78.1	75.3	73.9	74.0
Alternative	4.6	4.7	4.0	4.9	5.5	5.9	7.9	8.9	10.2
<b>West</b>									
Completed	80.7	80.5	82.6	80.2	82.0	83.6	81.2	81.8	82.8
Graduated	75.5	75.2	75.5	76.3	76.0	78.3	73.0	73.4	74.3
Alternative	5.3	5.3	7.0	3.9	6.0	5.4	8.2	8.4	8.5

<sup>1</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>2</sup>Numbers in these years reflect changes in CPS due to newly instituted computer assisted interviewing and/or due to the change in the population controls to the 1990 Census-based estimates, with adjustment.

NOTE: Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

## CONCLUSIONS

By October of 1996, 5 out of every 100 young adults enrolled in high school in 1995 left high school without successfully completing a high school program. In total, these dropouts account for approximately a half million of the 9.6 million 15- through 24-year-olds enrolled in high school. These numbers have not changed appreciably in recent years.

The cumulative effect of hundreds of thousands of young adults leaving school each year short of finishing a high school program translates into several million young adults who are out of school, yet lacking a high school credential. In 1996, there were 3.6 million 16- through 24-year-olds who although not enrolled in school, had not yet completed a high school program. Overall, 11.1 percent of the 32.4 million 16- through 24-year-olds in the United States were in this group of dropouts. Although there have been a number of year-to-year fluctuations in this rate, over the past 25 years there has been a gradual pattern of decline that, on average, amounts to a change of 0.13 percent per year.

The goal of reducing the dropout rate is to increase the percentage of young adults who complete a high school education. Despite the increased importance of a high school education, the high school completion rate has shown limited gains over the last quarter century and has been stable throughout most of the 1990s.

Young adults in today's society have two routes to completing a high school education. Attending a regular high school, with graduation following a four-year course of study, is still the norm in this country. However, an increasing number of young adults are opting to complete their high school education through an alternative route, customarily by passing the General Educational Development (GED) test. In 1996, just over three-quarters of the 18- through 24-year-olds not still in high school were reported as high school graduates (76.4 percent); however, another 10 percent of these youths were reported as having completed by an alternative route such as the GED.

Over the last five years, the percent graduating decreased among whites and blacks and among young adults in the Northeast, the Midwest, and the South. During the same time, the percent completing high school through an alternative test increased, with 1996 alternative completion rates close to 10 percent for white and black young adults and for young adults in the South and Midwest.

The net effect of these recent changes has resulted in stable dropout and overall high school completion rates. These findings suggest that in recent years the emphasis on decreasing dropout rates and conversely, increasing the high school completion rate, may have translated into an increase in the use of alternative methods of high school completion, but not an overall decrease in dropout rates or increase in the proportion of young adults holding a high school credential.

Perhaps these alternative completers would have otherwise been dropouts; if that is the case, then recent efforts have succeeded in curbing another increase in high school dropout rates. It is also possible that the increased acceptance of alternative credentials has provided a different route for students who would otherwise have completed high school by means of a regular graduation.

## **APPENDIX A**

### **Standard Error and Time Series Tables**

**Table A1—Standard errors and population sizes for Table 1: Event dropout and persistence rates and number and distribution of dropouts from grades 10–12, ages 15–24, by background characteristics: October 1996**

Characteristics	Event dropout and persistence rate		Percent of all dropouts	
	Standard error	Population size (in thousands)	Standard error	Population size (in thousands)
Total	0.35	—	—	485
Sex				
Male	0.50	17,521	3.6	241
Female	0.51	17,521	3.6	245
Race–ethnicity <sup>1</sup>				
White, non-Hispanic	0.39	17,432	3.6	267
Black, non-Hispanic	1.19	16,669	3.5	103
Hispanic	2.06	21,405	4.5	100
Family income <sup>2</sup>				
Low income level	1.46	1,299	3.3	145
Middle income level	0.51	5,478	3.6	282
High income level	0.42	2,835	2.4	59
Region				
Northeast	0.68	11,620	2.4	61
Midwest	0.68	14,627	3.0	109
South	0.64	16,930	3.5	180
West	0.82	15,706	3.2	135

—Not applicable.

<sup>1</sup>Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

<sup>2</sup>Family income in current residence. Low income is defined as the bottom 20 percent of all family incomes for 1996; middle income is between 20 and 80 percent of all family incomes; and high income is the top 20 percent of all family incomes.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

**Table A2—Standard errors for Table 2: Event dropout and persistence rates and number and distribution of dropouts from grades 10–12, ages 15–24, by age group: October 1996**

Age	Event dropout and persistence rate		Percent of all dropouts	
	Standard error	Population size (in thousands)	Standard error	Population size (in thousands)
Total	0.35	9,612	—	485
Age*				
15–16	0.55	2,859	2.92	100
17	0.51	3,228	3.03	110
18	0.74	2,544	3.35	151
19	1.68	724	2.45	64
20–24	4.23	256	2.40	61

—Not applicable.

\*Age when a person dropped out may be one year younger, because the dropout event could occur at any time over a 12-month period.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

**Table A3—Standard errors for Table 3: Membership, dropout counts, and event dropout rates for grades 9–12, 1994–95**

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Data for table 3 represents a universe collection and, as such, do not have an associated standard error. This sheet is intended as a placeholder to keep numbering consistent with the report.

**Table A4—Standard errors for Table 4: Rate and number of status dropouts, ages 16–24:  
October 1992 through October 1996**

	1992 <sup>1</sup>	1993 <sup>1</sup>	October 1994 <sup>1,2</sup>	1995 <sup>1,2</sup>	1996 <sup>1,2</sup>
Status dropout rate (percent)	0.28	0.28	0.28	0.29	0.26
Number of status dropouts (in thousands)	88	87	91	93	91

<sup>1</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>2</sup>Numbers in these years may reflect changes in CPS due to newly instituted computer-assisted interviewing and/or due to the change in the population controls to the 1990 Census-based estimates, with adjustment.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

**Table A5—Standard errors for Table 5: Rate, number, and distribution of status dropouts, ages 16–24, by sex, race–ethnicity, income, and region: October 1996**

Characteristics	Status dropout rate	Number of status dropouts (in thousands)	Percent of all dropouts	Percent of population
Total	0.26	91	—	—
Sex				
Male	0.37	65	1.32	0.41
Female	0.37	63	1.32	0.41
Race–ethnicity <sup>1</sup>				
White, non-Hispanic	0.27	61	1.30	0.37
Black, non-Hispanic	0.85	43	1.13	0.36
Hispanic	1.55	75	1.89	0.46
Family income <sup>2</sup>				
Low income level	0.83	53	1.27	0.33
Middle income level	0.36	68	1.32	0.41
High income level	0.30	22	0.57	0.35
Region				
Northeast	0.47	29	0.87	0.33
Midwest	0.45	37	0.95	0.37
South	0.48	59	1.29	0.41
West	0.62	49	1.17	0.36

—Not applicable.

<sup>1</sup>Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

<sup>2</sup>Low income is defined as the bottom 20 percent of all family incomes for 1994; middle income is between 20 and 80 percent of all family incomes; and high income is the top 20 percent of all family incomes.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

**Table A6—Standard errors for Table 6: Percentage distribution of status dropouts, ages 16–24, by level of schooling attained and race–ethnicity: October 1996**

Level of schooling attained	Total	Race–ethnicity*		
		White, non-Hispanic	Black, non-Hispanic	Hispanic
Total	—	—	—	—
Level of schooling attained				
Less than 1st grade	0.31	0.38	0.41	0.95
1st, 2nd, 3rd, or 4th grade	0.40	0.33	0.58	1.47
5th or 6th grade	0.62	0.13	0.78	2.40
7th or 8th grade	0.82	1.27	2.02	2.15
Less than 9 <sup>th</sup> grade	1.07	1.35	2.24	3.15
9th grade	1.01	1.48	2.69	2.68
Less than 10 <sup>th</sup> grade	1.29	1.82	3.25	3.29
10th grade	1.11	1.79	3.37	2.31
11th grade	1.21	1.92	3.55	2.67
12th grade, but no diploma	0.78	1.11	2.37	2.01

—Not applicable.

\*Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

**Table A7—Standard errors for Table 7: Rate and number of status dropouts, ages 16–24, by recency of migration and ethnicity: October 1996**

Recency of migration	Status dropout rate	Number of dropouts (in thousands)	Status dropout rate	
			Hispanic	Non-Hispanic
Total <sup>1</sup>	0.28	90	1.08	0.26
Born outside 50 states and D.C.	1.21	41	1.84	0.23
First generation <sup>2</sup>	0.85	27	0.94	0.12
Second generation or more <sup>3</sup>	0.29	74	1.41	0.08

<sup>1</sup>Total includes a small proportion for whom place of birth is unknown.

<sup>2</sup>Individuals defined as first generation were born in the 50 states or the District of Columbia and have one or both parents born outside the 50 states and the District of Columbia.

<sup>3</sup>Individuals defined as second generation or more were born in the 50 states or the District of Columbia and have both parents born in the 50 states and the District of Columbia.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996.

**Table A8—Standard errors for Table 8: Status dropout rate, ages 16–24, by income and race–ethnicity: October 1996**

Family income	Total	Race–ethnicity <sup>1</sup>		
		White, non-Hispanic	Black, non-Hispanic	Hispanic
Total	0.26	0.27	0.85	1.55
Family income <sup>2</sup>				
Low income level	0.83	1.03	1.86	3.19
Middle income level	0.36	0.39	1.04	1.99
High income level	0.30	0.28	1.35	4.01

<sup>1</sup>Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

<sup>2</sup>Low income is defined as the bottom 20 percent of all family incomes for 1996; middle income is between 20 and 80 percent of all family incomes; and high income is the top 20 percent of all family incomes.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

**Table A9—Standard errors for Table 9: Percentage of persons, ages 16–24, by race–ethnicity and income: October 1996**

Family income	Race–ethnicity <sup>1</sup>		
	White, non-Hispanic	Black, non-Hispanic	Hispanic
<b>Family income<sup>2</sup></b>			
Low income level	1.01	2.16	2.97
Middle income level	0.70	1.81	2.25
High income level	0.92	2.55	3.45

<sup>1</sup>Low income is defined as the bottom 20 percent of all family incomes for 1996; middle income is between 20 and 80 percent of all family incomes; and high income is the top 20 percent of all family incomes.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

**Table A10—Standard errors for Table 10: Status dropout rate, ages 16–24, by region and race–ethnicity: October 1996**

Region	Total	Race–ethnicity*		
		White, non-Hispanic	Black, non-Hispanic	Hispanic
Total	0.26	0.27	0.85	1.55
Region				
Northeast	0.47	0.46	1.88	3.52
Midwest	0.45	0.46	2.11	5.97
South	0.49	0.57	1.27	2.76
West	0.56	0.66	1.88	2.61

\*Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

**Table A11—Standard errors for Table 11: NELS:88 8th- to 12th-grade cohort dropout rates, by sex and race-ethnicity: 1992 and 1994**

Characteristics	Cohort dropout rate			
	Spring 1990-92 <sup>1</sup>	Spring 1988-92	August 1992	Spring 1994
Total	1.28	1.58	1.66	0.45
Sex				
Male	1.45	1.90	1.97	0.69
Female	1.18	1.36	1.42	0.48
Race-ethnicity <sup>2</sup>				
Asian/Pacific Islander	3.9	4.9	4.3	5.1
Hispanic	12.2	17.8	17.9	14.3
Black, non-Hispanic	9.1	13.4	12.7	8.4
White, non-Hispanic	5.9	9.1	8.3	5.7
Native American	22.3	30.4	30.4	16.9

<sup>1</sup>The denominator for this rate includes the members of the 1988 eighth-grade cohort who were still enrolled in school in the spring of 1990; excluded are students who dropped out between 1988 and 1990 and students who migrated out of the country or died.

<sup>2</sup>Not shown separately are 434 persons (approximately 2 percent of the unweighted sample) whose race-ethnicity is unknown.

NOTE: This table is based on the core cohort of eighth graders (i.e., this sample excludes students in the base year sample, whose sex, race, and dropout status were determined through the Followback Study of Excluded Students). As such, numbers may differ from earlier reports.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988 Base Year, First, and Second Followup Survey, 1988, 1990, 1992, and 1994, unpublished data.

**Table A12—Standard errors for Table 12: HS&B and NELS:88 10th- to 12th-grade cohort dropout rates, by demographic characteristics: August 1982 and 1992**

Status in 10th grade	Cohort dropout rate	
	HS&B 1980-82	NELS:88 1990-92
Total	0.42	0.36
Sex		
Male	0.64	0.45
Female	0.54	0.56
Race-ethnicity*		
Asian/Pacific Islander	0.73	2.14
Hispanic	1.65	1.44
Black, non-Hispanic	1.15	1.22
White, non-Hispanic	0.46	0.33
Native American	5.33	8.09
Family below poverty level		
Yes	0.86	1.16
No	0.28	0.35
Family composition		
Intact family	0.24	0.42
Two adults/step-parents	1.25	1.06
Single parent	0.78	0.96
Other	1.86	2.22
Own child in home		
Yes		
Male	6.50	2.35
Female	7.42	3.91
No		
Male	0.38	0.46
Female	0.36	0.56

\*Not shown separately are those included in the total whose race-ethnicity is unknown.

NOTE: See the technical appendix for the definitions of poverty and family composition used in these tables.

SOURCES: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, Sophomore Cohort, First Followup Survey, 1982, unpublished data. U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988 First and Second Followup Surveys, 1990 and 1992, unpublished data.

**Table A13—Standard errors for Table 13: High school completion rates and method of completion of 18- through 24-year-olds not currently enrolled in high school or below, by race-ethnicity: October 1988 through October 1996**

Completion method	Year								
	1988	1989	1990	1991	1992 <sup>2</sup>	1993 <sup>2,3</sup>	1994 <sup>2,3</sup>	1995 <sup>2,3</sup>	1996 <sup>2,3</sup>
<b>Total<sup>1</sup></b>									
Completed	0.37	0.37	0.36	0.37	0.36	0.36	0.36	0.37	0.36
Graduated	0.40	0.41	0.41	0.41	0.41	0.41	0.42	0.43	0.44
Alternative	0.20	0.21	0.22	0.21	0.23	0.23	0.26	0.28	0.31
<b>White non-Hispanic</b>									
Completed	0.38	0.38	0.37	0.38	0.36	0.37	0.36	0.38	0.36
Graduated	0.43	0.43	0.44	0.44	0.44	0.44	0.45	0.48	0.50
Alternative	0.24	0.23	0.26	0.25	0.27	0.26	0.30	0.32	0.39
<b>Black non-Hispanic</b>									
Completed	1.28	1.25	1.23	1.26	1.27	1.27	1.19	1.18	1.23
Graduated	1.39	1.37	1.36	1.39	1.41	1.40	1.38	1.40	1.45
Alternative	0.70	0.71	0.73	0.74	0.79	0.77	0.87	0.93	0.98
<b>Hispanic</b>									
Completed	2.37	2.30	2.35	2.32	2.32	2.26	2.06	2.00	2.05
Graduated	2.39	2.33	2.38	2.33	2.37	2.33	2.11	2.07	2.10
Alternative	0.92	0.99	0.96	0.81	1.10	1.13	1.12	1.17	1.06

<sup>1</sup>Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

<sup>2</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>3</sup>Numbers in this year may reflect changes in CPS due to newly instituted computer-assisted interviewing and/or due to the change in the population controls used this year to the 1990 Census-based estimates, with adjustment.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

**Table A14—Standard errors for Table 14: Completion rates and number and distribution of completers, ages 18–24, not currently enrolled in high school or below, by sex, race–ethnicity, income, and region: October 1996**

Characteristics	Completion rate		Percent of all completers Standard error
	Standard error	Population (in thousands)	
Total	0.36	84	—
<b>Sex</b>			
Male	0.53	60	0.56
Female	0.50	59	0.56
<b>Race–ethnicity<sup>1</sup></b>			
White, non-Hispanic	0.36	59	0.48
Black, non-Hispanic	1.23	39	0.45
Hispanic	2.05	66	0.52
<b>Family income<sup>2</sup></b>			
Low income level	1.00	49	0.48
Middle income level	0.46	63	0.56
High income level	0.42	19	0.48
<b>Region</b>			
Northeast	0.65	27	0.37
Midwest	0.63	34	0.48
South	0.66	54	0.56
West	0.84	46	0.48

—Not applicable.

<sup>1</sup>Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

<sup>2</sup>Low income is defined as the bottom 20 percent of all family incomes for 1996; middle income is between 20 and 80 percent of all family incomes; and high income is the top 20 percent of all family incomes.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

**Table A15—Standard errors for Table 15: High school completion rates of 18- through 24-year-olds not currently enrolled in high school or below by state: October 1991–93 and 1994–96**

State	1991–93*	1994–96*
<b>TOTAL</b>	0.21	0.21
<b>NORTHEAST</b>		
Connecticut	1.59	1.09
Maine	2.15	1.68
Massachusetts	1.16	1.29
New Hampshire	2.93	1.83
New Jersey	1.08	1.40
New York	0.77	0.78
Pennsylvania	0.83	0.88
Rhode Island	2.94	3.59
Vermont	4.08	2.14
<b>MIDWEST</b>		
Illinois	0.94	0.96
Indiana	1.34	1.38
Iowa	1.31	1.60
Kansas	1.64	1.65
Michigan	0.99	0.96
Minnesota	1.22	0.98
Missouri	1.34	1.53
Nebraska	2.00	2.04
North Dakota	2.40	2.74
Ohio	0.88	0.95
South Dakota	3.26	3.49
Wisconsin	1.13	1.24
<b>SOUTH</b>		
Alabama	1.77	1.84
Arkansas	2.16	1.75
Delaware	3.52	3.67
Florida	0.95	1.04
Georgia	1.44	1.36
Kentucky	1.95	1.93
Louisiana	1.77	1.75
Maryland	1.26	1.16
Mississippi	1.85	1.85
North Carolina	1.35	1.36
Oklahoma	2.15	1.67
South Carolina	1.79	1.59
Tennessee	1.76	1.58
Texas	0.87	0.84
Virginia	1.18	1.55
Washington, D.C.	4.65	3.81
West Virginia	2.57	1.71
<b>WEST</b>		
Alaska	4.27	2.14
Arizona	2.16	1.74
California	0.70	0.69
Colorado	1.78	1.53
Hawaii	2.45	2.21
Idaho	3.19	1.51
Montana	2.96	3.32
Nevada	3.41	2.08
New Mexico	2.99	1.39
Oregon	2.01	2.18
Utah	1.53	1.68
Washington	1.38	1.40
Wyoming	3.94	4.23

\*Numbers on this table reflect 3-year averages.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

**Table A16—Standard errors for Table 16: High school completion rates and method of completion of 18- through 24-year-olds not currently enrolled in high school or below, by region: October 1988 through October 1996**

Completion method	Year								
	1988	1989	1990	1991	1992 <sup>1</sup>	1993 <sup>1,2</sup>	1994 <sup>1,2</sup>	1995 <sup>1,2</sup>	1996 <sup>1,2</sup>
<b>Total</b>									
Completed	0.37	0.37	0.36	0.37	0.36	0.36	0.36	0.37	0.36
Graduated	0.40	0.41	0.41	0.41	0.41	0.41	0.42	0.43	0.44
Alternative	0.20	0.21	0.22	0.21	0.23	0.23	0.26	0.28	0.31
<b>Northeast</b>									
Completed	0.74	0.73	0.72	0.73	0.74	0.75	0.72	0.74	0.76
Graduated	0.83	0.81	0.82	0.83	0.86	0.86	0.87	0.91	1.01
Alternative	0.43	0.40	0.45	0.45	0.50	0.49	0.55	0.60	1.13
<b>Midwest</b>									
Completed	0.63	0.63	0.66	0.67	0.62	0.66	0.60	0.67	0.64
Graduated	0.71	0.71	0.77	0.76	0.74	0.75	0.74	0.81	0.86
Alternative	0.36	0.37	0.46	0.40	0.45	0.40	0.48	0.51	0.65
<b>South</b>									
Completed	0.68	0.68	0.66	0.67	0.64	0.65	0.65	0.65	0.64
Graduated	0.74	0.74	0.72	0.74	0.72	0.73	0.75	0.76	0.77
Alternative	0.37	0.37	0.35	0.38	0.41	0.42	0.47	0.49	0.53
<b>West</b>									
Completed	0.88	0.89	0.85	0.89	0.87	0.85	0.86	0.85	0.81
Graduated	0.96	0.97	0.97	0.95	0.96	0.95	0.98	0.98	0.94
Alternative	0.50	0.50	0.57	0.43	0.54	0.52	0.60	0.61	0.60

<sup>1</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>2</sup>Numbers in these years reflect changes in CPS due to newly instituted computer-assisted interviewing and/or due to the change in the population controls to the 1990 Census-based estimates, with adjustment.

NOTE: Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

**Table A17—Standard errors for table A: Proportion of 15- to 24-year-olds dropping out of grades 10 to 12, proportion of 16- to 24-year-olds who were dropouts, and proportion of 18- to 24-year-olds who completed high school, by race-ethnicity: 1996**

	Total	White, non-Hispanic	Black, non-Hispanic	Hispanic
Percent age 15 to 24 dropping out in 1995	0.35	0.39	1.19	2.06
Percent of youth 16 to 24 who were dropouts in 1996	0.26	0.27	0.85	1.55
Percent of youth 18 to 24 who were high school completers in 1996	0.36	0.36	1.23	2.05

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

**Table A18—Supporting data for Figure A: Proportion of 15- to 24-year-olds dropping out of grades 10 to 12, proportion of 16- to 24-year-olds who were dropouts, and proportion of 18- to 24-year-olds who completed high school: October 1972 to 1994**

Year	Event rate	Status rate	Completers age 18 to 24
	15- to 24- year-olds dropouts grades 10 to 12	16- to 24- year-olds dropouts in age group	
1972	6.1	14.6	82.8
1973	6.3	14.1	83.7
1974	6.7	14.3	83.6
1975	5.8	13.9	83.8
1976	5.9	14.1	83.5
1977	6.5	14.1	83.6
1978	6.7	14.2	83.6
1979	6.7	14.6	83.1
1980	6.1	14.1	83.9
1981	5.9	13.9	83.8
1982	5.5	13.9	83.8
1983	5.2	13.7	83.9
1984	5.1	13.1	84.7
1985	5.2	12.6	85.4
1986	4.7	12.2	85.5
1987 <sup>1</sup>	4.1	12.7	84.7
1988 <sup>1</sup>	4.8	12.9	84.5
1989 <sup>1</sup>	4.5	12.6	84.7
1990 <sup>1</sup>	4.0	12.1	85.6
1991 <sup>1</sup>	4.0	12.5	84.9
1992 <sup>1,2</sup>	4.4	11.0	86.4
1993 <sup>1,2</sup>	4.5	11.0	86.2
1994 <sup>1,2,3</sup>	5.3	11.5	85.8
1995 <sup>1,2,3</sup>	5.7	12.0	85.3
1996 <sup>1,2,3</sup>	5.0	11.1	86.2

<sup>1</sup>Numbers for these years reflect new editing procedures instituted by the Bureau of the Census for cases with missing data on school enrollment items.

<sup>2</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>3</sup>Numbers in this year may reflect changes in CPS due to newly instituted computer assisted interviewing and/or due to the change in the population controls used this year to the 1990 Census-based estimates, with adjustment.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (Various Years).

**Table A19—Supporting data for Figure 1: Event dropout rates for grades 10–12, ages 15–24, by race–ethnicity: October 1972 through October 1996**

Year	Total	Race–ethnicity <sup>1</sup>		
		White, non-Hispanic	Black, non-Hispanic	Hispanic
(percent)				
1972	6.1	5.3	9.5	11.2
1973	6.3	5.5	9.9	10.0
1974	6.7	5.8	11.6	9.9
1975	5.8	5.0	8.7	10.9
1976	5.9	5.6	7.4	7.3
1977	6.5	6.1	8.6	7.8
1978	6.7	5.8	10.2	12.3
1979	6.7	6.0	9.9	9.8
1980	6.1	5.2	8.2	11.7
1981	5.9	4.8	9.7	10.7
1982	5.5	4.7	7.8	9.2
1983	5.2	4.4	7.0	10.1
1984	5.1	4.4	5.7	11.1
1985	5.2	4.3	7.8	9.8
1986	4.7	3.7	5.4	11.9
1987 <sup>2</sup>	4.1	3.5	6.4	5.4
1988 <sup>2</sup>	4.8	4.2	5.9	10.4
1989 <sup>2</sup>	4.5	3.5	7.8	7.8
1990 <sup>2</sup>	4.0	3.3	5.0	7.9
1991 <sup>2</sup>	4.0	3.2	6.0	7.3
1992 <sup>2,3</sup>	4.4	3.7	5.0	8.2
1993 <sup>2,3</sup>	4.5	3.9	5.8	6.7
1994 <sup>2,3,4</sup>	5.3	4.2	6.6	10.0
1995 <sup>2,3,4</sup>	5.7	4.5	6.4	12.4
1996 <sup>2,3,4</sup>	5.0	4.1	6.7	9.0

<sup>1</sup>Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

<sup>2</sup>Numbers for these years reflect new editing procedures instituted by the Bureau of the Census for cases with missing data on school enrollment items.

<sup>3</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>4</sup>Numbers in these years may reflect changes in CPS due to newly instituted computer assisted interviewing and/or due to the change in the population controls to the 1990 Census-based estimates, with adjustment.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

**Table A20—Standard errors for Figure 1: Event dropout rates for grades 10–12, ages 15–24, by race–ethnicity: October 1972 through October 1996**

Year	Total	Race–ethnicity <sup>1</sup>		
		White, non-Hispanic	Black, non-Hispanic	Hispanic
(percent)				
1972	0.33	0.34	1.32	2.80
1973	0.33	0.35	1.35	2.65
1974	0.34	0.35	1.41	2.52
1975	0.32	0.33	1.25	2.49
1976	0.32	0.35	1.15	2.05
1977	0.34	0.37	1.20	2.13
1978	0.34	0.36	1.30	2.74
1979	0.34	0.37	1.32	2.43
1980	0.33	0.35	1.20	2.56
1981	0.33	0.34	1.29	2.28
1982	0.34	0.36	1.21	2.31
1983	0.33	0.35	1.18	2.44
1984	0.33	0.36	1.06	2.51
1985	0.34	0.37	1.26	2.55
1986	0.32	0.34	1.05	2.69
1987 <sup>2</sup>	0.28	0.31	1.16	1.74
1988 <sup>2</sup>	0.36	0.39	1.20	3.09
1989 <sup>2</sup>	0.36	0.37	1.39	2.65
1990 <sup>2</sup>	0.33	0.36	1.12	2.27
1991 <sup>2</sup>	0.34	0.36	1.20	2.18
1992 <sup>2,3</sup>	0.35	0.38	1.09	2.24
1993 <sup>2,3</sup>	0.36	0.40	1.20	2.03
1994 <sup>2,3,4</sup>	0.37	0.40	1.22	2.19
1995 <sup>2,3,4</sup>	0.38	0.41	1.18	2.31
1996 <sup>2,3,4</sup>	0.35	0.39	1.19	2.06

<sup>1</sup>Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

<sup>2</sup>Numbers for these years reflect new editing procedures instituted by the Bureau of the Census for cases with missing data on school enrollment items.

<sup>3</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>4</sup>Numbers in these years may reflect changes in CPS due to newly instituted computer assisted interviewing and/or due to the change in the population controls to the 1990 Census-based estimates, with adjustment.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

**Table A21—Supporting data for Figure 2: Event dropout rates for grades 10–12, ages 15–24, by family income: October 1972 through October 1996**

Characteristics	Event dropout rate	Family income <sup>1</sup>		
		Low income level	Middle income level	High income level
1972	6.1	14.1	6.7	2.5
1973	6.3	17.3	7.0	1.8
1974 <sup>2</sup>	6.7	—	—	—
1975	5.8	15.7	6.0	2.6
1976	5.9	15.4	6.8	2.1
1977	6.5	15.5	7.6	2.2
1978	6.7	17.4	7.3	3.0
1979	6.7	17.1	6.9	3.6
1980	6.1	15.8	6.4	2.5
1981	5.9	14.4	6.2	2.8
1982	5.5	15.2	5.6	1.8
1983	5.2	10.4	6.0	2.2
1984	5.1	13.9	5.1	1.8
1985	5.2	14.2	5.2	2.1
1986	4.7	10.9	5.1	1.6
1987 <sup>3</sup>	4.1	10.3	4.7	1.0
1988 <sup>3</sup>	4.8	13.7	4.7	1.3
1989 <sup>3</sup>	4.5	10.0	5.0	1.1
1990 <sup>3</sup>	4.0	9.5	4.3	1.1
1991 <sup>3</sup>	4.0	10.6	4.0	1.0
1992 <sup>3,4</sup>	4.4	10.9	4.4	1.3
1993 <sup>3,4</sup>	4.5	12.3	4.3	1.3
1994 <sup>3,4,5</sup>	5.3	13.0	5.2	2.1
1995 <sup>3,4,5</sup>	5.7	13.3	5.7	2.0
1996 <sup>3,4,5</sup>	5.0	11.1	5.1	2.1

—Data not available.

<sup>1</sup>Low income is defined as the bottom 20 percent of all family incomes for 1994; middle income is between 20 and 80 percent of all family incomes; and high income is the top 20 percent of all family incomes. See the technical appendix to this report for a full definition of family income.

<sup>2</sup>Data not available for this year.

<sup>3</sup>Numbers for these years reflect new editing procedures instituted by the Bureau of the Census for cases with missing data on school enrollment items.

<sup>4</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>5</sup>Numbers in these years may reflect changes in CPS due to newly instituted computer assisted interviewing and/or due to the change in the population controls to the 1990 Census-based estimates, with adjustment.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

**Table A22—Standard errors for Figure 2: Event dropout rates for grades 10–12, ages 15–24, by family income: October 1972 through October 1996**

Characteristics	Event dropout rate	Family income <sup>1</sup>		
		Low income level	Middle income level	High income level
1972	0.37	1.73	0.50	0.44
1973	0.37	1.84	0.52	0.36
1974 <sup>2</sup>	0.38			
1975	0.36	1.75	0.48	0.43
1976	0.36	1.79	0.52	0.37
1977	0.37	1.72	0.53	0.39
1978	0.38	1.86	0.53	0.44
1979	0.38	1.78	0.52	0.49
1980	0.37	1.66	0.51	0.42
1981	0.36	1.65	0.49	0.46
1982	0.36	1.60	0.49	0.37
1983	0.35	1.42	0.50	0.42
1984	0.36	1.56	0.48	0.39
1985	0.36	1.60	0.49	0.41
1986	0.34	1.40	0.48	0.37
1987 <sup>3</sup>	0.32	1.35	0.47	0.28
1988 <sup>3</sup>	0.35	1.53	0.46	0.33
1989 <sup>3</sup>	0.35	1.37	0.49	0.32
1990 <sup>3</sup>	0.34	1.41	0.46	0.33
1991 <sup>3</sup>	0.33	1.43	0.44	0.31
1992 <sup>3,4</sup>	0.35	1.42	0.46	0.36
1993 <sup>3,4</sup>	0.36	1.57	0.46	0.35
1994 <sup>3,4,5</sup>	0.37	1.55	0.48	0.44
1995 <sup>3,4,5</sup>	0.38	1.46	0.51	0.42
1996 <sup>3,4,5</sup>	0.35	1.39	0.48	0.43

—Data not available.

<sup>1</sup>Low income is defined as the bottom 20 percent of all family incomes for 1994; middle income is between 20 and 80 percent of all family incomes; and high income is the top 20 percent of all family incomes. See the technical appendix to this report for a full definition of family income.

<sup>2</sup>Data not available for this year.

<sup>3</sup>Numbers for these years reflect new editing procedures instituted by the Bureau of the Census for cases with missing data on school enrollment items.

<sup>4</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>5</sup>Numbers in these years may reflect changes in CPS due to newly instituted computer assisted interviewing and/or due to the change in the population controls to the 1990 Census-based estimates, with adjustment.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

**Table A23—Supporting data for Figure 3: Status dropout rates for persons ages 16–24, by race–ethnicity: October 1972 through October 1996**

Year	Total	Race–ethnicity		
		White, non-Hispanic	Black, non-Hispanic	Hispanic
(percent)				
1972	14.6	12.3	21.3	34.3
1973	14.1	11.6	22.2	33.5
1974	14.3	11.8	21.2	33.0
1975	13.9	11.4	22.8	29.2
1976	14.1	11.9	20.5	31.4
1977	14.1	11.9	19.8	33.0
1978	14.2	11.9	20.2	33.3
1979	14.6	12.0	21.1	33.8
1980	14.1	11.3	19.2	35.2
1981	13.9	11.4	18.4	33.2
1982	13.9	11.4	18.4	31.7
1983	13.7	11.2	18.0	31.6
1984	13.1	11.0	15.5	29.8
1985	12.6	10.4	15.2	27.6
1986	12.2	9.7	14.1	30.1
1987 <sup>2</sup>	12.7	10.4	14.2	28.6
1988 <sup>2</sup>	12.9	9.6	14.3	35.8
1989 <sup>2</sup>	12.6	9.4	13.9	33.0
1990 <sup>2</sup>	12.1	9.0	13.2	32.4
1991 <sup>2</sup>	12.5	8.9	13.6	35.3
1992 <sup>2,3</sup>	11.0	7.7	13.7	29.4
1993 <sup>2,3</sup>	11.0	7.9	13.6	27.5
1994 <sup>2,3,4</sup>	11.5	7.7	12.6	30.0
1995 <sup>2,3,4</sup>	12.0	8.6	12.1	30.0
1996 <sup>2,3,4</sup>	11.1	7.3	13.0	29.4

<sup>1</sup> Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

<sup>2</sup> Numbers for these years reflect new editing procedures instituted by the Bureau of the Census for cases with missing data on school enrollment items.

<sup>3</sup> Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>4</sup> Numbers in this year may reflect changes in CPS due to newly instituted computer assisted interviewing and/or due to the change in the population controls used this year to the 1990 Census-based estimates, with adjustment.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

**Table A24—Standard errors for Figure 3: Status dropout rates for persons ages 16–24, by race–ethnicity: October 1972 through October 1996**

Year	Total	Race–ethnicity <sup>1</sup>		
		White, non-Hispanic	Black, non-Hispanic	Hispanic
(percent)				
1972	0.28	0.29	1.07	2.22
1973	0.27	0.28	1.06	2.24
1974	0.27	0.28	1.05	2.08
1975	0.26	0.27	1.06	2.02
1976	0.26	0.28	1.01	2.01
1977	0.27	0.28	1.00	2.02
1978	0.27	0.28	1.00	2.00
1979	0.27	0.28	1.01	1.98
1980	0.26	0.27	0.97	1.89
1981	0.26	0.27	0.93	1.80
1982	0.27	0.29	0.98	1.92
1983	0.28	0.29	0.97	1.93
1984	0.27	0.29	0.92	1.91
1985	0.27	0.29	0.92	1.93
1986	0.27	0.28	0.90	1.88
1987 <sup>2</sup>	0.28	0.30	0.91	1.84
1988 <sup>2</sup>	0.31	0.32	1.00	2.30
1989 <sup>2</sup>	0.31	0.32	0.98	2.19
1990 <sup>2</sup>	0.29	0.30	0.94	1.92
1991 <sup>2</sup>	0.30	0.31	0.95	1.94
1992 <sup>2,3</sup>	0.28	0.29	0.95	1.86
1993 <sup>2,3</sup>	0.28	0.29	0.94	1.79
1994 <sup>2,3,4</sup>	0.28	0.29	0.89	1.66
1995 <sup>2,3,4</sup>	0.29	0.30	0.88	1.64
1996 <sup>2,3,4</sup>	0.26	0.27	0.85	1.55

<sup>1</sup>Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

<sup>2</sup>Numbers for these years reflect new editing procedures instituted by the Bureau of the Census for cases with missing data on school enrollment items.

<sup>3</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>4</sup>Numbers in this year may reflect changes in CPS due to newly instituted computer assisted interviewing and/or due to the change in the population controls used this year to the 1990 Census-based estimates, with adjustment.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

**Table A25—Supporting data for Figure 4: Completion rates for persons ages 18–24 not currently enrolled in high school or below, by race–ethnicity: October 1972 through October 1996**

Year	Total	Race–ethnicity <sup>1</sup>		
		White, non-Hispanic	Black, non-Hispanic	Hispanic
1972	82.8	86.0	72.1	56.2
1973	83.7	87.0	71.6	58.7
1974	83.6	86.7	73.0	60.1
1975	83.8	87.2	70.2	62.2
1976	83.5	86.4	73.5	60.3
1977	83.6	86.7	73.9	58.6
1978	83.6	86.9	73.4	58.8
1979	83.1	86.6	72.6	58.5
1980	83.9	87.5	75.2	57.1
1981	83.8	87.1	76.7	59.1
1982	83.8	87.0	76.4	60.9
1983	83.9	87.4	76.8	59.4
1984	84.7	87.5	80.3	63.7
1985	85.4	88.2	81.0	66.6
1986	85.5	88.8	81.8	63.5
1987 <sup>2</sup>	84.7	87.7	81.9	65.1
1988 <sup>2</sup>	84.5	88.7	80.9	58.2
1989 <sup>2</sup>	84.7	89.0	81.9	59.4
1990 <sup>2</sup>	85.6	89.6	83.2	59.1
1991 <sup>2</sup>	84.9	89.4	82.5	56.5
1992 <sup>2,3</sup>	86.4	90.7	82.0	62.1
1993 <sup>2,3</sup>	86.2	90.1	81.9	64.4
1994 <sup>2,3,4</sup>	85.8	90.7	83.3	61.8
1995 <sup>2,3,4</sup>	85.3	89.8	84.5	62.8
1996 <sup>2,3,4</sup>	86.2	91.5	83.0	61.9

<sup>1</sup>Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

<sup>2</sup>Numbers for these years reflect new editing procedures instituted by the Bureau of the Census for cases with missing data on school enrollment items.

<sup>3</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>4</sup>Numbers in this year may reflect changes in CPS due to newly instituted computer assisted interviewing and/or due to the change in the population controls used this year to the 1990 Census-based estimates, with adjustment.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

**Table A26—Standard errors for Figure 4: Completion rates for persons ages 18–24 not currently enrolled in high school or below, by race–ethnicity: October 1972 through October 1996**

Year	Total	Race–ethnicity <sup>1</sup>		
		White, non-Hispanic	Black, non-Hispanic	Hispanic
1972	0.35	0.35	1.42	2.78
1973	0.34	0.34	1.39	2.79
1974	0.33	0.34	1.38	2.57
1975	0.33	0.33	1.40	2.61
1976	0.33	0.34	1.33	2.55
1977	0.33	0.34	1.33	2.52
1978	0.33	0.33	1.32	2.45
1979	0.33	0.30	1.32	2.40
1980	0.32	0.33	1.26	2.28
1981	0.32	0.33	1.20	2.22
1982	0.34	0.35	1.26	2.36
1983	0.34	0.35	1.25	2.39
1984	0.33	0.35	1.18	2.32
1985	0.33	0.35	1.18	2.39
1986	0.33	0.35	1.17	2.29
1987 <sup>2</sup>	0.35	0.37	1.19	2.23
1988 <sup>2</sup>	0.38	0.39	1.33	2.70
1989 <sup>2</sup>	0.38	0.39	1.30	2.62
1990 <sup>2</sup>	0.36	0.37	1.23	2.35
1991 <sup>2</sup>	0.37	0.38	1.26	2.32
1992 <sup>2</sup>	0.36	0.36	1.27	2.32
1993 <sup>2</sup>	0.36	0.37	1.27	2.26
1994 <sup>2,3,4</sup>	0.36	0.36	1.19	2.06
1995 <sup>2,3,4</sup>	0.37	0.38	1.18	2.00
1996 <sup>2,3,4</sup>	0.36	0.36	1.23	2.05

<sup>1</sup>Due to relatively small sample sizes, American Indian/Alaskan Natives and Asian/Pacific Islanders are included in the total but are not shown separately.

<sup>2</sup>Numbers for these years reflect new editing procedures instituted by the Bureau of the Census for cases with missing data on school enrollment items.

<sup>3</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>4</sup>Numbers in this year may reflect changes in CPS due to newly instituted computer assisted interviewing and/or due to the change in the population controls used this year to the 1990 Census-based estimates, with adjustment.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

## **APPENDIX B**

### **Technical Notes**

## Definition of Who Is a Dropout

There are variations in the dropout definitions in the existing data sources, including the Current Population Survey (CPS), the High School and Beyond Study (HS&B), and the National Education Longitudinal Study of 1988 (NELS:88). In addition, the age or grade span examined and the type of dropout rate—status, event, or cohort—varies across the data sources. Furthermore, there were potentially significant changes in CPS procedures in 1986, 1992, and 1994.

The dropout collection through the National Center for Education Statistics (NCES) Common Core of Data (CCD) is designed to be consistent with the current CPS procedures. However, the CCD collection includes all dropouts in grades 7 through 12 versus only grades 10 through 12 in CPS; it is on administrative records rather than a household survey as in CPS; and counts anyone receiving a GED outside of a regular (approved) secondary education program as a dropout as opposed to the CPS approach of counting GED certificate holders as high school completers.

One of the concerns addressed in the NCES CCD data collection on dropouts is the development and implementation of a nationally consistent definition of a dropout to be used in school districts and state departments of education. Currently, there is considerable variation across local, state, and federal data collections on such issues as:

- whether those below the legal school-leaving age are identified as dropouts;
- whether those who complete a grade and drop out over the summer are attributed to the grade completed or the next grade;
- whether students entering correctional institutions are considered dropouts;
- whether those in GED programs or with an equivalency certificate are considered dropouts;
- whether those not graduating with their class (but not leaving school) are considered dropouts; and
- whether those leaving high school early to enter college are considered dropouts.

There will, no doubt, be some discontinuities in dropout reporting as the new and more consistent data become available.

## Defining and Calculating Event Dropout Rates Using the CCD

The Common Core of Data (CCD) administered by NCES is an annual survey of the state-level education agencies in the 50 states, the District of Columbia, and the outlying areas. Statistical information is collected on public schools, staff, students, and finance.

A dropout data collection component was field tested during the 1989-90 school year. The participants were in approximately 300 school districts that included representatives from 27 states and two territories. The data were gathered through administrative records maintained at school districts and schools. The field test data were used to inform the design of a dropout statistics component for CCD.

In the CCD dropout data collection, the event of dropping out is the focus of the collection. A school dropout is defined as an individual who was enrolled in school at some time during the previous year, was not enrolled at the beginning of the current school year, had not graduated from high school or completed an approved educational program, and did not meet any of the following exclusionary conditions:

- death;
- temporary absence due to suspension or illness; or
- transfer to another public school district, private school, or state- or district-approved education program.

For the purpose of this definition:

- a school year is the 12-month period of time beginning with the normal opening of school in the fall, with dropouts from the previous summer reported for the year and grade for which they fail to enroll;
- an individual has graduated from high school or completed an approved education program upon receipt of formal recognition from school authorities; and
- a state- or district-approved education program may include special education programs, home-based instruction, and school-sponsored GED preparation.

This new collection was initiated with a set of instructions to state CCD coordinators in the summer of 1991. Those instructions specified the details of dropout data to be collected during the 1991-92 school year. Dropouts, like graduates, are reported for the preceding school year. The 1991-92 data were submitted to NCES as a component of the 1992-93 CCD data collection. Most recently, the 1994-95 data were submitted as a component of the 1995-96 CCD.

## Defining and Calculating Dropout Rates Using the CPS

### *Event Rates*

The October Supplement to the CPS is the only current national data source that can be used to estimate annual national dropout rates. As a measure of recent dropout experiences, the event rate measures the proportion of students who dropped out over a one-year interval of time.

The numerator of the event rate for 1996 is the number of persons 15 through 24 years old surveyed in 1996 (grades 10–12) who were enrolled in high school in October 1995, were not enrolled in high school in October 1996, and who also did not complete high school (that is, had not received a high school diploma or an equivalency certificate) between October 1995 and October 1996.

The denominator of the event rate is the sum of the dropouts (that is, the numerator) and the number of all persons 15 through 24 years old who attended grades 10, 11, and 12 last year who are still enrolled or who graduated or completed high school last year.

The dropout interval is defined to include the previous summer and the current school year; so that once a grade is completed, the student is then at risk of dropping out of the next grade. Given that the data collection is tied to each young adult's enrollment status in October of two consecutive years, any students who drop out and return within the 12-month period are not counted as dropouts.

### *Status Rates*

The status dropout rate is a cumulative rate that estimates the proportion of young adults who are dropouts, regardless of when they dropped out.

The numerator of the status rate for 1996 is the number of young adults ages 16 through 24 years of age who, as of October 1996, have not completed high school and are not currently enrolled. The denominator is the total number of 16- through 24-year-olds in October 1996.

## CPS Design

CPS is a nationally representative sample survey of all households. The survey is conducted in approximately 60,000 dwelling units in 729 primary sampling units. Dwelling units are in-sample for four successive monthly interviews, out-of-sample for the next 8 months, and then returned to the sample for the following four months. The sample frame is a complete list of dwelling-unit addresses at the Census updated by demolitions and new construction and field

listings. The population surveyed excludes members of the Armed Forces, inmates of correctional institutions, and patients in long-term medical or custodial facilities; it is referred to as the civilian, non-institutionalized population. Typically, about 4 percent of dwelling units are not interviewed, because occupants are not at home after repeated callbacks, or for some other reason.

An adult member of each household serves as the informant for that household, supplying data for each member of the household. In addition, supplementary questions regarding school enrollment are asked about eligible household members 3 years old and over. Some interviews are conducted by phone using computer-assisted telephone interviewing.

### **CPS Dropout Data Collection**

CPS data on educational attainment and enrollment status in the current year and prior year are used to identify dropouts; and additional CPS data are used to describe some basic characteristics of dropouts. The CPS provides the only source of national time series data on dropout rates. However, because CPS collects no information on school characteristics and experiences, its uses in addressing dropout issues are primarily for providing some insights into who drops out. In addition, the sample design of the CPS yields estimates for Hispanics that tend to have large standard errors, which make it difficult to understand patterns in Hispanic dropout rates.

#### *Changes Introduced in 1986*

In an effort to improve data quality, in 1986 the Bureau of Census instituted new editing procedures for cases with missing data on school enrollment items. The effect of the editing changes were evaluated for data from 1986 by applying both the old and new editing procedures. The result was an increase in the number of students enrolled in school and a decrease in the number of students enrolled last year but not enrolled in the current year. The new editing procedures lowered, but not significantly, the 1986 event rate for grades 10-12, ages 14 through 24, by about 0.4 percentage points, from 4.69 to 4.28. The changes in the editing procedures made even less of a difference in the status dropout rates for 16- through 24-year-olds (12.2 percent based on the old procedures and 12.1 percent based on the new).

#### *Changes Introduced in 1992*

Prior to 1992, educational attainment was based on the control card questions on highest grade attended and completed. Identification as a high school graduate was derived based on attendance and completion of grade 12.

The control card items used to identify educational attainment were:

- What is the highest grade or year...has attended?
- Did...complete that grade?

The 1992 redesign of the CPS introduced a change in the data used to identify high school completers. Dropout data from the CPS year are now based on a combination of control card data on educational attainment and October Supplement data on school enrollment and educational attainment. In 1992 the Census Bureau changed the items on the control card which measured each individual's educational attainment.

The October CPS Supplement items used to identify dropouts include the following:

- Is...attending or enrolled in regular school?
- What grade or year is...attending?
- Was...attending or enrolled in a regular school or college in October, 199-, that is, of October of last year?
- What grade or year was...attending last year?

The new control card educational attainment item is as follows:

- What is the highest level of school... has completed or the highest degree...has received?

Educational attainment status is now based on the response to the control card item. The following response categories are used for high school:

- 9th grade,
- 10th grade,
- 11th grade, and
- 12th grade—no diploma.

Students whose highest grade completed is the 9th, 10th, or 11th grade are assumed to have dropped out in the next grade.

The following response categories are used to identify high school completers:

- high school graduate—high school diploma or the equivalent (for example GED);
- some college—no degree; through
- Doctorate degree

Although the response categories are not automatically read to each respondent, they can be used as a prompt to help clarify the meaning of a question or a response. Identification as a high school completer is based on the direct response to the new control card educational item.

Differences in the pre- and post-1992 methods of identifying high school completers come from the observation that not all 12th-grade completers receive a high school diploma or equivalent, and not all holders of a high school diploma or certificate complete the 12th grade. These differences have an impact on the numbers and proportions of event and status dropouts.

*Differences in event rates.* In the case of the event rate, in prior years students who completed 12th grade and left school without graduation or certification were counted as completers when they were in fact dropouts. On the other hand, some students who left school because they completed high school before the 12th grade were identified as dropouts when they were really early completers (e.g., those who passed the California Challenge Exam, received a GED certificate, or were admitted early to college).<sup>41</sup> The current use of actual graduation or completion status includes the first group as dropouts and the second group as completers.

Compared to before, the event dropout rate includes 12th graders who did not receive a credential of some sort in the numerator count of dropouts and the early completers are subtracted from the numerator. The denominator is not changed.

The net effect of these changes is small, resulting in an increase in the aggregate event dropout rate that is not significant. In 1992, the October CPS included both versions of the educational attainment items—the old items based on the number of years of school completed and the new one based on the more accurate response categories.<sup>42</sup> Using the old items, the estimated event rate for 1992 was 4.0, compared with a rate of 4.4 percent in 1992 using the new educational attainment item.

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<sup>41</sup>Although prior to 1992 the questionnaire did not have the words "high school diploma or equivalency certificate," the interviewer instructions included an instruction to record 12th grade for people who completed high school with a GED or other certificate although they had dropped out earlier. The specific inclusion of these words on the questionnaire appear to have made a difference in the quality of responses from the household informant.

<sup>42</sup>Unlike prior years, however, data for individuals missing on the variables representing years of school completed ("What is the highest grade or year ...has attended?" and "Did...complete that grade?") were not imputed by the Census Bureau. For this analysis we imputed missing data on these variables based on the grade they attended last year (if enrolled last year). For those individuals that were missing data and were not enrolled last year we imputed their highest grade completed by examining the responses to the new educational attainment variable.

*Differences in the status rate.* The status rate involves a third group of students who were miscoded prior to 1992. These students leave high school before completing the 12th grade, never complete the 12th grade, but later graduate or complete high school by some alternative means, such as an equivalency exam. Prior to 1992 these young adults were coded as dropouts. Since 1992, members of this group have been coded as graduates or completers. Furthermore, the explicit inclusion of high school graduation or completion, including the GED (e.g., "GED") as a response category may have increased the likelihood of identifying late completers.

Under the procedures introduced in 1992, the 12th graders who do not complete high school or the equivalent are added to the numerator of the status dropout rate and early and late completers are subtracted from the numerator. The denominator is not changed. These changes, especially the identification and removal of late completers from the dropout count, contributed to a decrease in the status dropout rate. Indeed, using years of school completed rather than the new educational attainment item, the status rate in 1992 rises to 11.4 percent rather than the 11.0 percent based on the old educational attainment item. However, the estimate of 11.4 percent is still much lower than the status rate for 1991 (12.5 percent). While this could represent real change in the status dropout rate, the fact that this would be the largest decrease in the status dropout rate seen in the time series data from 1972 to 1995, coupled with the fact that the rate for 1993 also was 11.0 percent, leads one to speculate that the introduction of the new educational attainment item resulted in more accurate data on educational attainment throughout the survey, including the variables that had been used to calculate the number of years of school completed.

*Special education students.* One exception to the procedures to identify dropouts in CPS is the categorization of special education students. In principle, efforts are made by the Census Bureau to identify special education students in special schools and treat them as not enrolled. However, if special education students are not identified, they may be reported as completing 12th grade with no diploma. If this happens, they will, by definition, be counted as dropouts.

#### *Changes Introduced in 1994*

During the 1994 data collection and processing two additional changes were implemented in the CPS. Computer-assisted telephone interviewing was introduced, resulting in higher completion rates for each individual data item and thus less reliance on allocation of missing responses. If the allocation procedures yielded a distribution different from the 1994 reported patterns, there is the potential for a change in the distribution of the high school completion status.

In 1994 there were also changes introduced in the processing and computing phase of data preparation. The benchmarking year for these survey estimates was changed from the 1980 Census to the 1990 Census, and adjustments for undercount in the 1990 Census were included. Thus, any age, sex, or racial-ethnic groups that were found to be under-represented in the 1990 Census are given increased weights. An analysis of the effect of the changes in the benchmarking

year using the 1993 data indicate that the change especially affected the weights assigned to Hispanic young adults (table B1).

**Table B1—Average weight and number in population using 1980 and 1990 Census-based weights, by race-ethnicity: October 1993**

	1980 Based		1990 Based		
	Average weight	Number in thousands (population)	Average weight	Number in thousands (population)	Percentage change
<b>Race-ethnicity</b>					
White, non-Hispanic	1.79	23,911	1.84	24,611	2.7
Black, non-Hispanic	2.25	5,087	2.33	5,285	3.4
Hispanic	2.09	3,998	2.48	4,747	15.7
Other	1.32	1,351	1.51	1,541	12.6

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, various years, unpublished data.

These changes have the potential for affecting both the numerator and denominator of the dropout rates. Analyses of the 1993 data show that the change in the benchmark year for the sample weights increased the male and Hispanic status and event dropout rates, while having little effect on the white or black rates (table B2).

Table B2 also shows that overall the change in control years had a larger impact on status rates than on event rates. Using the 1990 controls increases the event rate by only 1.3 percent, but raises the status rate by 3.2 percent—from 11.0 percent to 11.4 percent.

### **Defining and Calculating High School Completion Rates Using the CPS**

The educational attainment and high school completion status data from the October CPS are also used to measure the high school graduation and completion rates.

In years prior to 1974, completion rates were reported in a series of separate two-year age groups, but no overall rates comparable to the event and status dropout rates were computed. The completion rate computed and published first in 1994 is for the young adult population in the years beyond high school—that is, the 18- to 24-year-old population. These rates are reported nationally by race-ethnicity and at the state level, three-year moving averages are computed to yield more stable estimates.

**Table B2—Estimated event and status rates based on 1980 census controls and 1990 Census controls : October 1993**

	1980-based weights		1990-based weights		Difference in rates	
	Event	Status	Event	Status	Event	Status
Total	4.46	11.01	4.52	11.36	1.3%	3.2%
<b>Sex</b>						
Male	4.58	11.17	4.65	11.61	1.5	4.0
Female	4.34	10.85	4.38	11.10	1.0	2.3
<b>Race-ethnicity</b>						
White, non-Hispanic	3.93	7.94	3.95	7.96	0.5	0.3
Black, non-Hispanic	5.83	13.56	5.81	13.52	-0.3	-0.3
Hispanic	6.72	27.52	6.90	27.88	2.8	1.3
Other	2.79	7.01	2.87	7.04	2.9	0.4
<b>Family income</b>						
Low income level	12.32	23.88	12.44	24.38	1.0	2.1
Middle income level	4.33	9.90	4.36	10.22	0.7	3.2
High income level	1.34	2.72	1.36	2.75	1.1	1.3

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey (various years), unpublished data.

As was noted in the text, the state completion rates reflect the experiences of the 18- to 24-year-olds living in the state at the time of the interview; thus, movements in and out of states to accommodate employment and postsecondary education may be evident in some states. For example, a state with a relatively large unskilled labor workplace sector might have a lower high school completion rate than anticipated, due to an influx of young workers. Conversely, a state with a disproportionate number of colleges and universities might have a higher high school completion rate than anticipated, due to an influx of postsecondary students.

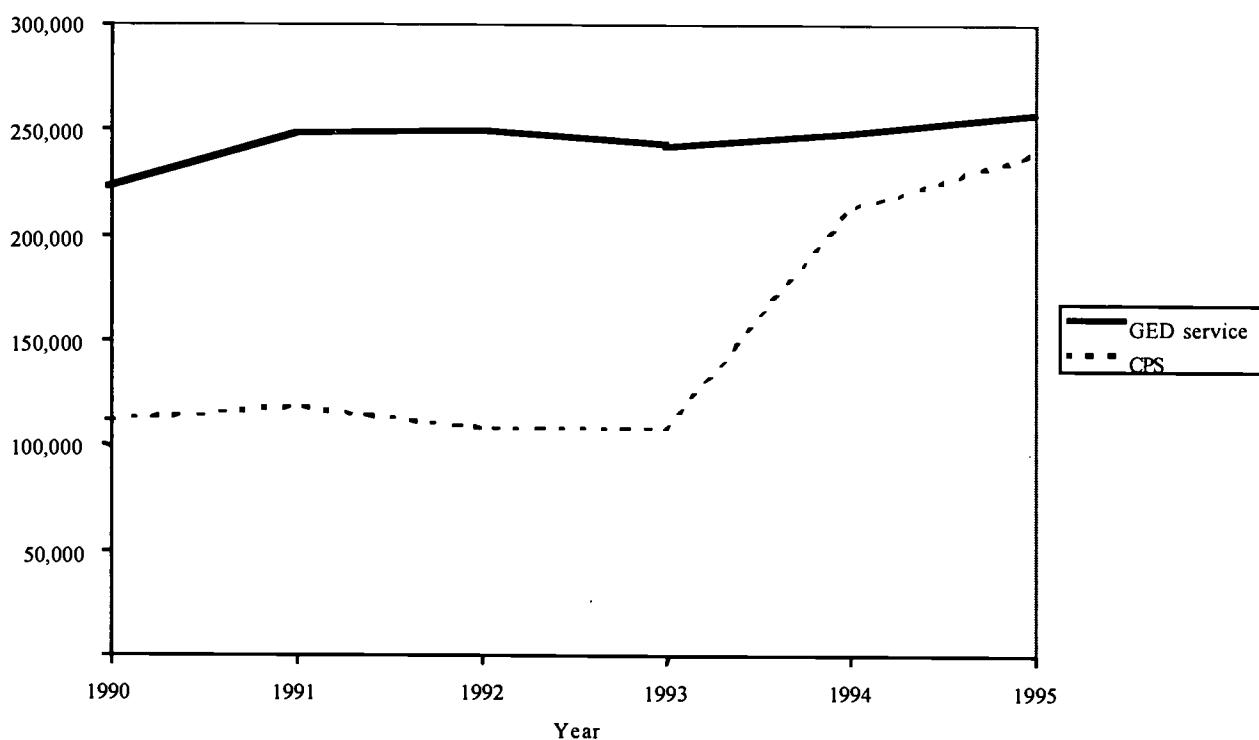
#### *Increases in GED rates*

The section on completion indicated that there was a substantial increase in the last few years in the estimate of the percentage of 18- to 24-year-olds getting GEDs. In 1993 it was only 4.9 percent, but went from 7.0 in 1994, 7.7 in 1995, and 9.8 in 1996. Although the standard

errors on these estimates are fairly large, the absolute change is also quite large. The large increases in 1994 and 1995 came at the time that CPS instituted CATI in 1994.

The American Council on Education, which administers the GED, produces annual reports on the number of persons taking the GED and the number of persons who were issued a GED credential. From these reports it is possible to calculate the number of 18- to 24-year-olds who received a GED in the past year for 1990 through 1995. It is also possible to estimate the same quantity from the CPS data for 1990 to 1995 by looking at only those who were reported to have completed a GED last year and using this, along with the GED item, to calculate how many 18- to 24-year-olds obtained GEDs each year. The CPS numbers for 1994 and 1995 are much closer to the estimates from the American Council on Education than previous years (figure B1).

**Figure B1—Number of 18- to 24-year-olds who received a GED in given year**



SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, various years, unpublished data; and American Council on Education, GED Testing Service, *GED Statistical Report*, 1990 to 1995.

## Definition of Family Income in CPS

Family income is derived from a single question asked of the household respondent. Income includes money income from all sources including jobs, business, interest, rent, social security payments, and so forth. The income of nonrelatives living in the household is excluded, but the income of all family members 14 years old and over, including those temporarily living away, is included. Family income refers to receipts over a 12-month period.

Income for families from which no income information was obtained (about 5 percent of families) was imputed. A sequential hot deck procedure was used. A total of 200 imputation classes were created—5 levels of the age of head of household by 5 levels of the education of the head of household by 2 levels for the employment status of the head of household, and 4 levels of the number of workers in the household. To minimize the multiple use of a single donor, up to 5 donors were placed in each imputation class. A donor was selected at random from these when a family with missing income information was encountered. In a few instances (about 10 of 50,000 families in each year) an imputation class had no donors but a family from the class with missing income information was encountered. In these cases a donor was selected by collapsing similar classes until a non-empty imputation class was created.

To facilitate comparisons over time, the categorical family income information was transformed into a continuous family income variable. The transformation was accomplished by randomly assigning for each family an income value from the income interval to which their income belonged. For intervals below the median a rectangular probability density function was used; for those above the median a Pareto probability density function was used. The methodology has a feature that if the continuous family income variable were transformed back to a categorical family income variable, the value for each family would be identical to the original data. Based on the continuous family income variable, a family income percentile variable is calculated for each person in the survey which represents that person's position in the family income distribution. For example, if 25 percent of all persons have a lower value of family income (and 75 percent have a higher value), then the person's family income percentile variable has a value of 25. The methodology gives all persons in the same household the same value of both the categorical and continuous versions of family income. There are several issues that affect the interpretation of dropout rates by family income using the CPS. First, it is possible that the family income of the students at the time they dropped out was somewhat different than their current family income. (The problem is potentially greatest with status dropouts who could have dropped out several years ago.)

Furthermore, family income is from a single question asked of the household respondent in the October CPS. In some cases, there are persons 15 through 24 years old living in the household who are unrelated to the household respondent, yet whose family income is defined as the income of the family of the household respondent. Therefore, the current household income of the respondent may not accurately reflect that person's family background. In particular, in 1991 some of the dropouts in the 15- through 24-year age range were not still living in a family

unit with a parent present. However, an analysis of 1991 status dropout rates by family income, race-ethnicity, and family status (presence of parent in the household) indicates that the bias introduced by persons not living in their parents' household is small (table B3). The status dropout rates for black and white persons were similar with or without the parent present. For example, 20.6 percent of low income blacks without a parent present were dropouts compared with 21.3 percent of those living in their parents' household. In addition, the relationship between dropout rates and income held within each racial category regardless of whether the person was living in a household with his or her parent. That is, blacks and whites within income levels dropped out at similar levels—with or without the parent present. However, this was not true of Hispanics. Hispanics in upper income levels not residing with either parent were more likely than upper income Hispanics with parents present to be status dropouts.

**Table B3—Status dropout rates, by household type by race-ethnicity and income: October 1992**

	Total	Parent not present	Parent present
Total	100.0	38.0	62.0
White, non-Hispanic	100.0	37.1	62.9
Low income	19.9	20.5	18.1
Middle income	7.9	10.0	6.6
High income	2.1	7.7	1.6
Black, non-Hispanic	100.0	33.9	66.1
Low income	21.0	20.6	21.3
Middle income	7.6	9.1	7.1
High income	3.0	4.1	2.7
Hispanic	100.0	48.7	51.3
Low income	45.8	59.6	26.2
Middle income	28.4	46.0	15.4
High income	12.8	28.4	8.3

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1991, unpublished data.

## **Definition of Geographic Regions in CPS**

There are four Census regions used in this report: Northeast, Midwest, South, and West. The Northeast consists of Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, and Pennsylvania. The Midwest consists of Ohio, Indiana, Illinois, Michigan, Wisconsin, Iowa, Minnesota, Missouri, North Dakota, South Dakota, Nebraska, and Kansas. The South consists of Delaware, Maryland, Washington D.C., Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas. The West consists of Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Alaska, and Hawaii.

## **Definition of Immigration Status in CPS**

Immigration status was derived from a variable on the control card inquiring about the citizenship status of the reference person:

### **Citizen Status:**

- 1 = Native, born in the U.S.
- 2 = Native, born in Puerto Rico or U.S. outlying area
- 3 = Native, born abroad of American parent or parents
- 4 = Foreign born, U.S. citizen by naturalization
- 5 = Foreign born, not a citizen of the U.S.

Those coded '1' above (Native, born in U.S.) were considered born in United States. All others were considered foreign born. (Less than 1 percent of Hispanics were born abroad of American parents.)

## **Imputation for Item Non-Response**

For many key items in the October CPS, the Bureau of the Census imputes data for cases with missing data due to item non-response. However, for some of the items that were used in this report, item non-response was not imputed by the Bureau of the Census. Special imputations were conducted for these items using a sequential hot deck procedure implemented through the PROC IMPUTE computer program developed by the American Institutes for Research.<sup>43</sup> Three categories of age, two categories of race, two categories of sex, and two categories of citizenship were used as imputation cells.

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<sup>43</sup>D. H. McLaughlin, *Imputation for Non-Response Adjustment*, American Institutes for Research, October 1991, updated: February 1994.

## Defining and Calculating Cohort Dropout Rates Using NELS:88

The NELS:88 baseline comprised a national probability sample of all regular public and private 8th-grade schools in the 50 states and District of Columbia in the 1987-88 school year. Excluded from the NELS:88 sample were Bureau of Indian Affairs schools, special education schools for the handicapped, area vocational schools that do not enroll students directly, and schools for dependents of U.S. personnel overseas; such school-level exclusions have a very small impact on national estimates.

NELS:88 started with the base-year data collection in which students, parents, teachers, and school administrators were selected to participate in the survey. NELS:88 began with a target sample of 1,032 sample schools, of which 30 were deemed ineligible. Some 698 of the 1,002 eligible schools agreed to participate in the study. Given the longitudinal nature of the study, the initial school response rate of 69.7 percent was deemed too low to yield acceptable levels of schools, administrators, teachers, parents, and most importantly, students. To address this concern, a sample of sister schools was selected and 359 replacement schools were identified and added to the study. Responses were obtained from 1,057 schools, thus increasing the school response rate to 77.7 percent ( $1,057/(1,002+359)$ ). Usable student data were received for 1,052 of the schools.

The total eighth-grade enrollment for the 1,052 NELS:88 sample schools was 202,996. During the listing procedures (before 24-26 students were selected per school), 5.35 percent of the students were excluded because they were identified by school staff as being incapable of completing the NELS:88 instruments owing to limitations in their language proficiency or to mental or physical disabilities. Ultimately, 93 percent or 24,599 of the sample students participated in the base-year survey in the spring of 1988.

The NELS:88 first follow-up survey was conducted in the spring of 1990. Students, dropouts, teachers, and school administrators participated in the followup, with a successful data collection effort for approximately 93 percent of the base-year student respondents. In addition, because the characteristics and education outcomes of the students excluded from the base year may differ from those of students who participated in the base-year data collection, a special study was initiated to identify the enrollment status of a representative sample of the base-year ineligible students. Data from this sample were then combined with first and second follow-up data for the computation of 8th- to 10th-grade, 10th- to 12th-grade, and 8th- to 12th-grade cohort dropout rates.

The second follow-up survey was conducted in the spring of 1992. Students, dropouts, parents, teachers, and school administrators participated in this followup. Approximately 91 percent of the sample of students participated in the second follow-up survey, with 88 percent of the dropouts responding.

The second follow-up High School Transcript Study was conducted in the fall of 1992. Transcript data spanning the three or four years of high school (9th or 10th through 12th grades) were collected for 1) students attending, in the spring of 1992, schools sampled for the second follow-up school administrator and teacher surveys,<sup>44</sup> 2) all dropouts and dropouts in alternative programs who had attended high school for a minimum of one term; 3) all early graduates, regardless of school contextual sample type; and 4) triple eligibles enrolled in the twelfth grade in the spring of 1992, regardless of school affiliation. Triple eligibles are sample members who were ineligible—due to mental or physical handicap or language barrier—for the base year, first follow-up, and second follow-up surveys. The transcript data collected from schools included student-level data (e.g., number of days absent per school year, standardized test scores) and complete course-taking histories. Complete high school course-taking records were, of course, obtained only for those transcript survey sample members who graduated by the end of the spring term of 1992; incomplete records were collected for sample members who had dropped out of school, had fallen behind the modal progression sequence, or were enrolled in a special education program requiring or allowing more than twelve years of schooling.

A total of 1,287 contextual schools and 256 non-contextual schools responded to the request for transcripts. Reasons cited by school staff for not complying with the request included: inadequate permission for transcript release (some schools required parental permission for the release of minors' transcripts); no record of the sample member or no course-taking record because of brevity of enrollment; insufficient staff for transcript preparation (despite offers of remuneration for preparation costs); and archiving or transfer of sample member records. Student coverage rates were 89.5 percent for the total transcript sample and 74.2 percent for the dropout/alternative completers.

Missing from the cohort rates from NELS:88 is anyone who had dropped out prior to the spring of their eighth-grade year. Thus, the overall cohort rates reported here may be lower than they would have been if a younger cohort were used. This may be particularly important for Hispanics, given that CPS data show that Hispanic dropouts tend to have completed less schooling than other dropouts. The cohort rates also reflect the school enrollment status of both eligible and ineligible non-participants and participants, to the extent that this information could be obtained.

The following definition of a dropout was employed in NELS:88:

1. an individual who, according to the school (if the sample member could not be located) or according to the school and home, is not attending school (i.e., has not been in school for 4 consecutive weeks or more and is not absent due to accident or illness); or
2. a student who has been in school less than 2 weeks after a period in which he or she was classified as a dropout.

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<sup>44</sup>Schools selected for the contextual components of the second followup (the school administrator and teacher surveys) are referred to as *contextual* schools. Sample members enrolled in those schools are referred to as *contextual* students.

Thus, a student who was a temporary dropout (stopout) who was found by the study to be out of school for 4 consecutive school weeks or more and had returned to school (that is, had been back in school for a period of at least 2 weeks at the time of survey administration in the spring of 1990) would not be classified as a dropout for purposes of the cohort dropout rates reported here.

The basic NELS:88 procedure for identification of a dropout was to confirm school-reported dropout status with the student's household. For the first followup, dropout status was obtained first from the school and then confirmed with the household for 96.4 percent of the dropouts. Thus only 3.6 percent of the dropouts were identified by only school-reported information. For the second followup, 4.9 percent of the dropouts were identified by only school-reported information.

The 1988–1990 dropout rate requires data from both 1988 and 1990. As a result, the size of the sample used in computing the 1988 to 1990 rate is tied to the size of the sample in 1990. Many students changed schools between 1988 and 1990. Because of the costs associated with following small numbers of students to many schools, a subsampling operation was conducted at the time of the first followup. Of the 24,599 students who participated in 1988, 20,263 students were sampled, and 130 were found to be out of scope (due to death or migration out of the country). The dropout rates from 1988–1990 reflect the experiences of 20,133 sample cases. Some 1,088 sample cases dropped out and 19,045 sample cases continued in school.

The 1990–1992 rate starts from the 19,045 student sample cases. Some 91 of the student sample cases from 1990 were identified as out of scope in 1992. The dropout rates from 1990 to 1992 reflect the experiences of 18,954 student sample cases.

The 1988–1992 rates reflect the experiences of the 20,070 student sample cases. These cases result from the 20,263 subsampled student cases in 1990, less the 92 cases that were out of scope in both 1990 and 1992, less the 91 students sample cases identified as out of scope in 1992, less the 10 dropout sample cases identified as out of scope in 1992. Note that 24 student sample cases who were out of the country in 1990 returned to school in the U.S. by spring 1992, and an additional 14 student sample cases who were out of the country in spring 1990 returned to the U.S. by spring 1992 but did not reenroll (dropouts). And, another 354 student sample cases who dropped out between 1988 and 1990 returned to school by spring 1992.

## **HS&B Calculation of Cohort Dropout Rates**

In HS&B, students are reported as having either a regular diploma or some alternative credential—described as the equivalent of a high school diploma. The estimate that 7 percent of the high school completers from the class of 1982 held alternative credentials by 1986 refers to a comparison of alternative completers with all regular diploma recipients. The estimates of a 16.6 percent dropout rate and an 8.2 percent alternative completion rate by 1986 are based on a

comparison of on-time regular diploma recipients versus all other completers. The difference in the last two estimates is due to the fact that they are computed from two differently derived variables on the public use data files.

## Accuracy of Estimates

The estimates in this report are derived from samples and are subject to two broad classes of error—sampling and nonsampling error. Sampling errors occur because the data are collected from a sample of a population rather than from the entire population. Estimates based on a sample will differ somewhat from the values that would have been obtained from a universe survey using the same instruments, instructions, and procedures. Nonsampling errors come from a variety of sources and affect all types of surveys, universe as well as sample surveys. Examples of sources of nonsampling error include design, reporting, and processing errors, and errors due to nonresponse. The effects of nonsampling errors are more difficult to evaluate than those that result from sampling variability. As much as possible, procedures are built into surveys in order to minimize nonsampling errors.

In reporting sample survey data, estimates based on unweighted sample sizes less than 30 are not displayed. The standard error is a measure of the variability due to sampling when estimating a parameter. It indicates how much variance there is in the population of possible estimates of a parameter for a given sample size. Standard errors can be used as a measure of the precision expected from a particular sample. The probability that a complete census would differ from the sample by less than the standard error is about 68 out of 100. The chances that the difference would be less than 1.65 times the standard error are about 90 out of 100; that the difference would be less than 1.96 times the standard error, about 95 out of 100.

Standard errors for rates and number of persons based on CPS data were calculated using the following formulas:

### Dropout rate:

$$se = \sqrt{(b/N)(p)(100 - p)}$$

where  $p$  = the percentage ( $0 < p < 100$ ),

$N$  = the population on which the percentage is based, and

$b$  = the parameter associated with the characteristic;

$b$  is equal to 2,532 for the total or white population; 3,425 for the black population; and 5,772 for the Hispanic population ages 14 through 34 years old.

### Number of persons:

$$se = \sqrt{(bx)(1 - x/T)}$$

where  $x$  = the number of persons (i.e., dropouts),

$T$  = population in the category (i.e., blacks 16 through 24), and

$b$  = as above.

Standard errors for the estimates in the tables appear in appendix A.

In October of 1991, the Bureau of the Census released new  $b$  parameters for 1988 and 1990. With the release of the new parameters, the Bureau of the Census also made adjustments to the parameters for earlier years. Therefore, for some years, the standard errors presented in the appendix tables here are different than the standard errors presented in earlier reports.

### Methodology and Statistical Procedures

The comparisons in the text have all been tested for statistical significance to ensure that the differences are larger than those that might be expected due to sampling variation. Two types of comparisons have been made in the text.

*Differences in two estimated percentages.* The Student's  $t$  statistic can be used to test the likelihood that the differences between two percentages are larger than would be expected by sampling error.

$$t = \frac{P_1 - P_2}{\sqrt{se_1^2 + se_2^2}}$$

where  $P_1$  and  $P_2$  are the estimates to be compared and  $se_1$  and  $se_2$  are their corresponding standard errors.

As the number of comparisons on the same set of data increases, the likelihood that the  $t$  value for at least one of the comparisons will exceed 1.96 simply due to sampling error increases. For a single comparison, there is a 5 percent chance that the  $t$  value will exceed 1.96 due to sampling error. For five tests, the risk of getting at least one  $t$  value that high increases to 23 percent and for 20 comparisons, 64 percent.

One way to compensate for this danger when making multiple comparisons is to adjust the alpha level to take into account the number of comparisons being made. For example, rather than establishing an alpha level of 0.05 for a single comparison, the alpha level is set to ensure that the likelihood is less than 0.05 that the  $t$  value for any of the comparisons exceeds the critical value by chance alone when there are truly no differences for any of the comparisons. This Bonferroni adjustment is calculated by taking the desired alpha level and dividing by the number of possible comparisons, based on the variable(s) being compared. The  $t$  value corresponding to

the revised, lower alpha level must be exceeded in order for any of the comparisons to be considered significant. For example, to test for differences in dropout rates between whites, blacks, and Hispanics, the following steps would be involved:

- Establish the number of comparisons—in this case three (whites and blacks; whites and Hispanics; and blacks and Hispanics). The number of two-way comparisons that can be made equals  $[(n)(n-1)]/2$ , where  $n$  is the number of variable categories. Thus, with three categories the number of possible comparisons is  $[(3)(2)]/2 = 3$ .
- Divide the desired alpha level, 0.05, by the number of comparisons (e.g., three) to obtain the new alpha level ( $0.05/3 = 0.0166$ ).
- Consult a table of  $t$  statistics (or the standard normal table for  $z$  values if the  $N$  is large) to find the  $t$  value that corresponds to that alpha ( $t = 2.39$  for alpha = 0.0166).

All comparisons in this report were tested using the Bonferroni adjustment for the  $t$  tests. Where categories of two variables were involved, the number of comparisons used to make the Bonferroni adjustment was based on the relationship(s) being tested.

*Trends.* Regression analysis was used to test for trends across age groups and over time. Regression analysis assesses the degree to which one variable (the dependent variable) is related to a set of other variables (the independent variables). The estimation procedure most commonly used in regression analysis is ordinary least squares (OLS). While some of the trends span the entire period from 1972 to 1995, many of the rates reached a high point during the late 1970s. Thus, most of the descriptions that refer to "since the late 1970s" use 1978 as a starting point.

The analyses in this report were conducted on the event rates, status rates, and completion rates. The event rate and status rate estimates were used as dependent measures in the analysis with a variable representing time and a dummy variable controlling for changes in the editing procedure (0 = years 1968 to 1986, 1 = 1987 to 1995) used as independent variables. However, in these data some of the observations were less reliable than others (i.e., some years' standard errors were larger than other years'). In such cases OLS estimation procedures do not apply and it is necessary to modify the regression procedures to obtain unbiased regression parameters. The modification that is usually recommended transforms the observations to variables which satisfy the usual assumptions of ordinary least squares regression and then applies the usual OLS analysis to these variables.

This was done in this analysis using the data manipulation and regression capability of Microsoft EXCEL®. Each of the variables in the analysis was transformed by dividing each by the standard error of the relevant year's rate (event or status). The new dependent variable was then regressed on the new time variable and new editing-change dummy variable. All statements about trends in this report are statistically significant at the 0.05 level.

## **APPENDIX C**

### **Supplemental Tables**

**Table C1—Event dropout and persistence rates and number of dropouts ages 15–24 in grades 10–12: October 1990 through October 1996**

Year ending	Event dropout rate (percent)	School retention rate (percent)	Number of dropouts (in thousands)	Number of enrolled (in thousands)
1990	4.0	96.0	347	8,675
1991	4.0	96.0	348	8,700
1992 <sup>1</sup>	4.4	95.6	383	8,705
1993 <sup>1</sup>	4.5	95.5	381	8,469
1994 <sup>1,2</sup>	5.3	94.7	497	9,377
1995 <sup>1,2</sup>	5.7	94.3	544	9,509
1996 <sup>1,2</sup>	5.0	95.0	485	9,612

<sup>1</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>2</sup>Numbers in this year may reflect changes in CPS due to newly instituted computer-assisted interviewing and/or due to the change in the population controls used this year to the 1990 Census-based estimates, with adjustment.

NOTE: Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

**Table C2—Standard errors for Table C1: Event dropout and persistence rates and number of dropouts ages 15–24 in grades 10–12: October 1990 through October 1996**

Year ending	Event dropout rate (percent)	School persistence rate (percent)	Number of dropouts (in thousands)
1990	0.33	0.33	29
1991	0.34	0.34	29
1992 <sup>1</sup>	0.35	0.35	30
1993 <sup>1</sup>	0.36	0.36	30
1994 <sup>1,2</sup>	0.37	0.37	35
1995 <sup>1,2</sup>	0.38	0.38	36
1996 <sup>1,2</sup>	0.35	0.35	34

<sup>1</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>2</sup>Numbers in this year may reflect changes in CPS due to newly instituted computer-assisted interviewing and/or due to the change in the population controls used this year to the 1990 Census-based estimates, with adjustment.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

**Table C3—Event dropout rates, grades 10–12, ages 15–24, by sex and race–ethnicity:  
October 1972 through October 1996**

Year	Total	Male	Female	White, non-Hispanic		Black, non-Hispanic		Hispanic	
				Male	Female	Male	Female	Male	Female
(percent)									
1972	6.1	5.9	6.3	5.0	5.6	9.8	9.3	11.6	10.9
1973	6.3	6.8	5.7	6.0	5.0	11.9	8.2	7.9	11.9
1974	6.7	7.4	6.0	6.6	4.9	10.8	12.3	12.8	7.1
1975	5.8	5.4	6.1	4.7	5.4	8.4	9.0	10.3	11.6
1976	5.9	6.6	5.2	6.3	4.9	8.5	6.3	7.6	7.1
1977	6.5	6.9	6.1	6.6	5.6	7.8	9.3	9.8	5.4
1978	6.7	7.5	5.9	6.4	5.1	11.0	9.5	15.9	8.5
1979	6.7	6.8	6.7	6.4	5.7	7.8	11.7	10.5	9.1
1980	6.1	6.7	5.5	5.7	4.8	7.7	8.7	17.6	6.7
1981	5.9	6.0	5.8	5.2	4.5	9.4	10.0	10.7	10.7
1982	5.5	5.8	5.1	4.9	4.6	8.9	6.6	9.5	8.8
1983	5.2	5.8	4.7	4.7	4.0	6.9	7.1	13.8	6.2
1984	5.1	5.4	4.8	4.8	4.1	6.0	5.5	12.3	10.2
1985	5.2	5.4	5.0	4.6	4.1	8.3	7.3	9.4	10.0
1986	4.7	4.7	4.7	3.8	3.7	5.1	5.7	12.4	11.3
1987	4.1	4.3	3.8	3.9	3.1	6.2	6.7	4.8	6.1
1988 <sup>1</sup>	4.8	5.1	4.4	4.3	4.1	6.3	5.6	12.3	8.2
1989 <sup>1</sup>	4.5	4.5	4.5	3.7	3.3	7.0	8.6	7.8	7.7
1990 <sup>1</sup>	4.0	4.0	3.9	3.5	3.1	4.2	5.7	8.7	7.2
1991 <sup>1</sup>	4.0	3.8	4.2	2.8	3.7	5.3	6.8	10.1	4.6
1992 <sup>1,2</sup>	4.4	3.9	4.9	3.5	4.0	3.3	6.7	7.6	9.0
1993 <sup>1,2</sup>	4.5	4.6	4.3	4.1	3.7	6.4	5.3	5.1	8.0
1994 <sup>1,2,3</sup>	5.3	5.2	5.4	4.1	4.3	6.9	6.3	9.1	10.9
1995 <sup>1,2,3</sup>	5.7	6.2	5.3	4.9	4.1	8.3	4.6	11.8	12.9
1996 <sup>1,2,3</sup>	5.0	5.1	5.2	4.4	3.8	4.9	8.5	9.7	8.3

<sup>1</sup>Numbers for these years reflect new editing procedures instituted by the Bureau of the Census for cases with missing data on school enrollment items.

<sup>2</sup>Numbers for these years reflect new wording of the educational attainment in the CPS.

<sup>3</sup>Numbers in this year reflect changes in CPS due to newly instituted computer-assisted interviewing and/or due to the change in the population controls used this year to the 1990 Census-based estimates, with adjustment.

NOTE: Some figures are revised from those previously published.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

**Table C4—Standard errors for Table C3: Event dropout rates, grades 10–12, ages 15–24, by sex and race–ethnicity: October 1972 through October 1996**

Year	Total	Male	Female	White, non-Hispanic		Black, non-Hispanic		Hispanic	
				Male	Female	Male	Female	Male	Female
(percent)									
1972	0.33	0.46	0.48	0.47	0.50	1.96	1.79	3.99	3.93
1973	0.33	0.49	0.45	0.51	0.47	2.13	1.70	3.46	3.95
1974	0.34	0.51	0.46	0.54	0.46	1.99	1.99	4.00	3.04
1975	0.32	0.44	0.46	0.45	0.48	1.79	1.75	3.37	3.69
1976	0.32	0.48	0.43	0.52	0.47	1.74	1.52	3.05	2.76
1977	0.34	0.49	0.46	0.54	0.50	1.62	1.76	3.21	2.65
1978	0.34	0.51	0.46	0.53	0.48	2.00	1.71	4.22	3.35
1979	0.34	0.49	0.48	0.53	0.50	1.75	1.93	3.57	3.30
1980	0.33	0.49	0.45	0.51	0.48	1.69	1.72	4.48	2.70
1981	0.33	0.47	0.46	0.49	0.47	1.86	1.77	3.26	3.19
1982	0.34	0.49	0.46	0.52	0.50	1.81	1.59	3.19	3.34
1983	0.33	0.50	0.45	0.52	0.48	1.71	1.62	3.93	2.79
1984	0.33	0.49	0.46	0.53	0.49	1.57	1.44	3.94	3.23
1985	0.34	0.50	0.48	0.53	0.50	1.83	1.74	3.72	3.50
1986	0.32	0.46	0.45	0.48	0.47	1.45	1.51	3.92	3.68
1987 <sup>1</sup>	0.30	0.44	0.42	0.48	0.44	1.58	1.64	2.53	2.80
1988 <sup>1</sup>	0.36	0.52	0.50	0.55	0.56	1.71	1.67	4.52	4.09
1989 <sup>1</sup>	0.36	0.51	0.51	0.54	0.52	1.87	2.05	3.68	3.81
1990 <sup>1</sup>	0.33	0.47	0.47	0.52	0.50	1.49	1.67	3.47	2.98
1991 <sup>1</sup>	0.34	0.46	0.49	0.46	0.55	1.60	1.79	3.61	2.45
1992 <sup>1,2</sup>	0.35	0.46	0.53	0.52	0.56	1.27	1.75	2.98	3.36
1993 <sup>1,2</sup>	0.36	0.50	0.50	0.57	0.56	1.76	1.63	2.65	2.98
1994 <sup>1,2,3</sup>	0.37	0.51	0.53	0.55	0.57	1.76	1.68	2.91	3.27
1995 <sup>1,2,3</sup>	0.38	0.55	0.52	0.59	0.56	1.91	1.42	3.21	3.32
1996 <sup>1,2,3</sup>	0.35	0.50	0.51	0.57	0.54	1.48	1.84	3.00	2.81

<sup>1</sup>Numbers for these years reflect new editing procedures instituted by the Bureau of the Census for cases with missing data on school enrollment items.

<sup>2</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>3</sup>Numbers in this year may reflect changes in CPS due to newly instituted computer-assisted interviewing and/or due to the change in the population controls used this year to the 1990 Census-based estimates, with adjustment.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished data.

**Table C5—Rate, number, and distribution of status dropouts, by age: October 1996**

Age	Status dropout rate	Number of status dropouts	Population (in thousands)	Percent of all dropouts	Percent of population
Total	12.0	3,876	32,379	100.0	100.0
Age					
16	3.7	149	3,999	4.1	12.3
17	8.3	315	3,783	8.7	11.7
18	12.6	452	3,597	12.5	11.1
19	12.9	488	3,779	13.5	11.6
20	13.1	428	3,266	11.9	10.1
21	13.4	473	3,533	13.1	10.9
22	12.3	418	3,394	11.6	10.5
23	12.7	435	3,420	12.0	10.5
24	12.3	453	3,681	12.5	11.3

NOTE: Percentages may not sum to 100 percent due to rounding.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

**Table C6—Standard errors for Table C5: Rate, number, and distribution of status dropouts, by age: October 1996**

Age	Status dropout rate	Number of status dropouts (in thousands)	Percent of all dropouts	Percent of population
Total	0.26	91	—	—
Age				
16	0.47	22	0.57	0.28
17	0.71	22	0.57	0.28
18	0.88	32	0.84	0.28
19	0.87	35	0.91	0.27
20	0.94	33	0.86	0.27
21	0.91	31	0.80	0.27
22	0.89	32	0.84	0.27
23	0.86	33	0.84	0.28
24	0.86	34	0.87	0.29

—Not applicable.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

**Table C7—Status dropout rate, ages 16–24, by region: selected years October 1975 through October 1996**

Year	Total	Region			
		Northeast	Midwest	South	West
1975	13.9	11.3	10.9	18.9	13.0
1980	14.1	10.4	11.5	18.2	14.9
1985	12.6	9.9	9.8	15.2	14.6
1990 <sup>1</sup>	12.1	8.7	9.1	14.5	14.7
1991 <sup>1</sup>	12.5	9.1	9.7	14.1	15.9
1992 <sup>1,2</sup>	11.0	8.6	7.9	12.4	14.4
1993 <sup>1,2</sup>	11.0	8.5	8.8	13.0	12.5
1994 <sup>1,2,3</sup>	11.5	8.6	7.7	13.5	14.7
1995 <sup>1,2,3</sup>	12.0	8.4	8.9	14.2	14.6
1996 <sup>1,2,3</sup>	11.1	8.3	7.7	13.0	13.9

<sup>1</sup>Numbers for these years reflect new editing procedures instituted by the Bureau of the Census for cases with missing data on school enrollment items.

<sup>2</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>3</sup>Numbers in this year may reflect changes in CPS due to newly instituted computer-assisted interviewing and/or due to the change in the population controls used this year to the 1990 Census-based estimates, with adjustment.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "School Enrollment—Social and Economic Characteristics of Students," October (various years), *Current Population Reports*, Series P-20, and unpublished tabulations.

**Table C8—Standard errors for Table C7: Status dropout rate, ages 16–24, by region: selected years, October 1975 through October 1996**

Year	Total	Region			
		Northeast	Midwest	South	West
1975	0.26	0.52	0.46	0.54	0.62
1980	0.27	0.51	0.46	0.52	0.63
1985	0.27	0.54	0.49	0.52	0.67
1990 <sup>1</sup>	0.29	0.57	0.52	0.54	0.69
1991 <sup>1</sup>	0.30	0.54	0.50	0.51	0.83
1992 <sup>1,2</sup>	0.28	0.50	0.49	0.51	0.70
1993 <sup>1,2</sup>	0.28	0.50	0.51	0.52	0.67
1994 <sup>1,2,3</sup>	0.28	0.49	0.47	0.52	0.69
1995 <sup>1,2,3</sup>	0.29	0.49	0.51	0.53	0.69
1996 <sup>1,2,3</sup>	0.26	0.47	0.45	0.48	0.62

<sup>1</sup>Numbers for these years reflect new editing procedures instituted by the Bureau of the Census for cases with missing data on school enrollment items.

<sup>2</sup>Numbers for these years reflect new wording of the educational attainment item in the CPS.

<sup>3</sup>Numbers in this year may reflect changes in CPS due to newly instituted computer-assisted interviewing and/or due to the change in the population controls used this year to the 1990 Census-based estimates, with adjustment.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "School Enrollment—Social and Economic Characteristics of Students," October (various years), Current Population Reports, Series P-20, and unpublished tabulations.

**Table C9—Demographic characteristics of the sophomore classes of 1980 and 1990**

Status in 10th grade	HS&B 1980–82	NELS:88 1990–92
Total	100.0	100.0
Race–ethnicity*		
White, non-Hispanic	75.8	71.7
Minority	24.2	28.3
Asian/Pacific Islander	1.4	4.0
Hispanic	7.8	10.7
Black, non-Hispanic	13.4	12.5
Native American	1.6	1.1
Below poverty level		
Yes	13.0	17.6
No	87.1	82.4
Family composition		
Intact family	69.6	63.5
Non-intact family	30.4	36.5
Two adults/step-parents	8.9	15.2
Single parent	17.2	18.1
Other	4.3	3.1
Own children living in home		
Yes	0.6	2.5
No	99.4	97.5

\*Not shown separately are those included in the total whose race–ethnicity is unknown.

NOTE: See the technical appendix for the definitions of poverty and family composition used in these tables.

SOURCES: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, Sophomore Cohort, First Follow-up Survey, 1982, unpublished data. U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988 First and Second Follow-up Surveys, 1990 and 1992, unpublished data.

**Table C10—Standard errors for Table C9: Demographic characteristics of the sophomore classes of 1980 and 1990**

Status in 10th grade	HS&B 1980–82	NELS:88 1990–92
Total	—	—
Race–ethnicity*		
White, non-Hispanic	1.07	1.18
Minority	1.07	1.18
Asian, Pacific Islander	0.14	0.27
Hispanic	0.40	0.86
Black, non-Hispanic	0.84	0.79
Native American	0.23	0.20
Below poverty level		
Yes	0.51	0.69
No	0.51	0.69
Family composition		
Intact family	0.66	0.69
Non-intact family	0.66	0.69
Two adults/step-parents	0.34	0.51
Single parent	0.47	0.53
Other	0.26	0.23
Own children living in home		
Yes	0.09	0.16
No	0.09	0.16

— Not applicable.

\*Not shown separately are those included in the total whose race–ethnicity is unknown.

NOTE: See the technical appendix for the definitions of poverty and family composition used in these tables.

SOURCES: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, Sophomore Cohort, First Follow-up Survey, 1982, unpublished data. U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988 First and Second Follow-up Surveys, 1990 and 1992, unpublished data.

**Table C11—Percentage of persons attending high school or below by sex, race-ethnicity, age, and income: October 1996**

Characteristics	Age								
	15/16	17	18	19	20	21	22	23	24
Total	0.52	0.94	1.19	0.62	0.40	0.24	0.19	0.21	0.14
<b>Sex</b>									
Male	0.64	1.28	1.78	0.94	0.63	0.30	0.24	0.17	0.17
Female	0.84	1.38	1.54	0.82	0.51	0.35	0.31	0.38	0.23
<b>Race-ethnicity<sup>1</sup></b>									
White, non-Hispanic	0.59	1.10	1.43	0.56	0.42	0.18	0.21	0.15	0.14
Black, non-Hispanic	1.43	2.48	3.24	1.95	1.45	1.11	0.53	0.56	0.83
Hispanic	1.82	2.96	3.41	2.54	1.34	0.75	0.72	1.03	0.44
<b>Family income<sup>2</sup></b>									
Low income level	92.67	70.22	29.51	10.13	2.14	1.61	1.08	1.60	0.65
Middle income level	96.14	86.59	28.89	6.79	2.74	0.74	0.44	0.41	0.27
High income level	98.64	86.84	25.27	1.31	0.71	—	—	—	—

—Insufficient sample size

<sup>1</sup>Not shown separately are non-Hispanics who are neither black nor white, but who are included in the total.

<sup>2</sup>Low income is defined as the bottom 20 percent of all family incomes for 1996; middle income is between 20 and 80 percent of all family incomes; and high income is the top 20 percent of all family incomes.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1995, unpublished data.

**Table C12—Standard errors for Table C11: Percentage of persons attending high school or below by sex, race-ethnicity, age, and income: October 1996**

Characteristics	Age								
	15/16	17	18	19	20	21	22	23	24
Total	0.33	0.85	1.16	0.61	0.37	0.27	0.25	0.20	0.16
<b>Sex</b>									
Male	0.42	1.11	1.71	0.99	0.55	0.43	0.24	0.09	0.25
Female	0.52	1.30	1.53	0.70	0.51	0.34	0.43	0.39	0.22
<b>Race-ethnicity<sup>1</sup></b>									
White, non-Hispanic	0.38	0.98	1.38	0.60	0.28	0.34	0.30	0.24	0.16
Black, non-Hispanic	1.00	2.52	3.62	2.53	1.72	—	0.61	0.47	—
Hispanic	1.91	4.42	4.65	3.40	2.03	0.95	1.13	0.74	1.22
<b>Family income<sup>2</sup></b>									
Low income level	1.23	3.15	2.92	1.65	0.83	0.71	0.60	0.75	0.47
Middle income level	0.45	1.16	1.59	0.89	0.62	0.30	0.24	0.22	0.17
High income level	0.40	1.65	2.28	0.60	0.49	—	—	—	—

—Not Applicable

<sup>1</sup>Not shown separately are non-Hispanics who are neither black nor white, but who are included in the total.

<sup>2</sup>Low income is defined as the bottom 20 percent of all family incomes for 1996; middle income is between 20 and 80 percent of all family incomes; and high income is the top 20 percent of all family incomes.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1996, unpublished data.

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